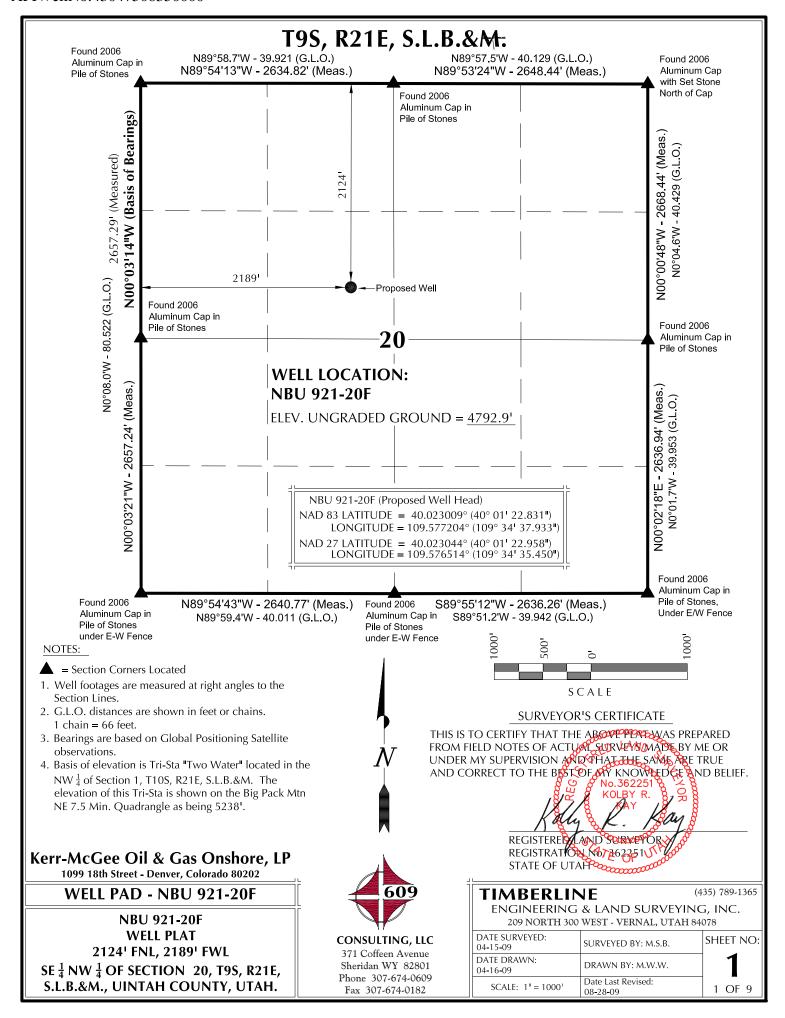
STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING					FORI			
APPLI	1. WELL NAME and	1. WELL NAME and NUMBER NBU 921-20F						
2. TYPE OF WORK DRILL NEW WELL (REENTER P	&A WELL (DEEPEN	WELL (3. FIELD OR WILDO	CAT NATURAL BUTTES		
4. TYPE OF WELL		oed Methane Well: NO			5. UNIT or COMMU	NITIZATION AGRE	EMENT NAME	
6. NAME OF OPERATOR KERF	R-MCGEE OIL & (GAS ONSHORE, L.P.			7. OPERATOR PHO			
8. ADDRESS OF OPERATOR P.C	. Box 173779, [Denver, CO, 80217			9. OPERATOR E-MA	IL ondragon@anadarko	.com	
10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE) UTU 0575		11. MINERAL OWNERS FEDERAL INDIA		FEE (12. SURFACE OWN	ERSHIP DIAN 📵 STATE (FEE ()	
13. NAME OF SURFACE OWNER (if box 12	= 'fee')	1			14. SURFACE OWN	ER PHONE (if box 1	.2 = 'fee')	
15. ADDRESS OF SURFACE OWNER (if box	12 = 'fee')				16. SURFACE OWN	ER E-MAIL (if box 1	12 = 'fee')	
17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN') Ute Tribe		18. INTEND TO COMM MULTIPLE FORMATION YES (Submit Com			19. SLANT VERTICAL DIF	RECTIONAL () HO	ORIZONTAL (
20. LOCATION OF WELL	FC	DOTAGES	QTR-QTR	SECTION	TOWNSHIP	RANGE	MERIDIAN	
LOCATION AT SURFACE	2124 F	NL 2189 FWL	SENW	20	9.0 S	21.0 E	S	
Top of Uppermost Producing Zone	2124 F	NL 2189 FWL	SENW	20	9.0 S	21.0 E	S	
At Total Depth	2124 F	NL 2189 FWL	SENW	20	9.0 S	21.0 E	S	
21. COUNTY UINTAH		22. DISTANCE TO NEA	AREST LEASE LIN 2124	E (Feet)	(Feet) 23. NUMBER OF ACRES IN DRILLING UNIT 1600			
		25. DISTANCE TO NEA (Applied For Drilling o		AME POOL	26. PROPOSED DEPTH MD: 10256 TVD: 10256			
27. ELEVATION - GROUND LEVEL 4793		28. BOND NUMBER	WYB000291		29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE Permit #43-8496			
		АТТ	ACHMENTS					
VERIFY THE FOLLOWING	ARE ATTACH	IED IN ACCORDANCE	E WITH THE UT	TAH OIL AND	GAS CONSERVATI	ON GENERAL RU	ILES	
WELL PLAT OR MAP PREPARED BY	LICENSED SUF	RVEYOR OR ENGINEER	№ сом	✓ COMPLETE DRILLING PLAN				
AFFIDAVIT OF STATUS OF SURFACE	OWNER AGRE	EEMENT (IF FEE SURFAC	CE) FORM	FORM 5. IF OPERATOR IS OTHER THAN THE LEASE OWNER				
DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY DRILLED)				OGRAPHICAL MA	P			
NAME Danielle Piernot	T	ITLE Regulatory Analyst		PHONE 720 929-6156				
SIGNATURE DATE 12/01/2009				EMAIL danielle.piernot@anadarko.com				
API NUMBER ASSIGNED 43047508350000	A	PPROVAL		Bro	00 gill			
Per				mit Manager				

API Well No: 43047508350000 Received: 12/1/2009

	Proposed Hole, Casing, and Cement								
String	Hole Size	Casing Size	Top (MD)	Bottom (MD)					
Prod	7.875	4.5	0	10256					
Pipe	Grade	Length	Weight						
	Grade HCP-110 LT&C	656	11.6						
	Grade I-80 Buttress	9600	11.6						

API Well No: 43047508350000 Received: 12/1/2009

	Proposed Hole, Casing, and Cement								
String	Hole Size	Casing Size	Top (MD)	Bottom (MD)					
Surf	11	8.625	0	2595					
Pipe	Grade	Length	Weight						
	Grade I-80 LT&C	2595	28.0						



NBU 921-20F

Surface: 2,124' FNL 2,189' FWL (SE/4NW/4) Sec. 20 T9S R21E

Uintah, Utah Mineral Lease: UTU 0575 Surface Owner: Ute Indian Tribe Operator: Kerr-McGee Oil & Gas Onshore LP

ONSHORE ORDER NO. 1

DRILLING PROGRAM

1. – 2. Estimated Tops of Important Geologic Markers: Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations:

<u>Formation</u>	ormation <u>Depth</u>	
Uinta	0 – Surface	
Green River	1,616'	
Birds Nest	1,885'	Water
Mahogany	2,391'	Water
Wasatch	4,968'	Gas
Mesaverde	7,987'	Gas
MVU2	8,957'	Gas
MVL1	9,498'	Gas
TD	10,256'	

3. <u>Pressure Control Equipment</u> (Schematic Attached)

Please refer to the attached Drilling Program.

4. Proposed Casing & Cementing Program:

Please refer to the attached Drilling Program.

5. <u>Drilling Fluids Program</u>:

Please refer to the attached Drilling Program.

Evaluation Program:

Please refer to the attached Drilling Program.

7. Abnormal Conditions:

Maximum anticipated bottomhole pressure calculated at 10,256' TD, approximately equals 6,390 psi (calculated at 0.62 psi/foot).

Maximum anticipated surface pressure equals approximately 4,133 psi (bottomhole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot).

8. Anticipated Starting Dates:

Drilling is planned to commence immediately upon approval of this application.

9. <u>Variances:</u>

Please refer to the attached Drilling Program.

Onshore Order #2 – Air Drilling Variance

Kerr-McGee Oil & Gas Onshore LP (KMG) respectfully requests a variance to several requirements associated with air drilling outlined in Onshore Order 2

- Blowout Prevention Equipment (BOPE) requirements;
- Mud program requirements; and
- Special drilling operation (surface equipment placement) requirements associated with air drilling.

This Standard Operating Practices addendum provides supporting information as to why KMG current air drilling practices for constructing the surface casing hole should be granted a variance to Onshore Order 2 air drilling requirements.

The reader should note that the air rig is used only to construct a stable surface casing hole through a historically difficult lost circulation zone. A conventional rotary rig follows the air rig, and is used to drill and construct the majority of the wellbore.

More notable, KMG has used the air rig layout and procedures outlined below to drill the surface casing hole in approximately 675 wells without incident of blow out or loss of life.

Background

In a typical well, KMG utilizes an air rig for drilling the surface casing hole, an interval from the surface to surface casing depths, which varies in depth from 1,700 to 2,800 feet. The air rig drilling operation does not drill through productive or over pressured formations in KMG field, but does penetrate the Uinta and Green River Formations. The purpose of the air drilling operation is to overcome the severe loss circulation zone in the Green River known as the Bird's Nest while creating a stable hole for the surface casing. The surface casing hole is generally drilled to approximately 500 feet below the Bird's Nest.

Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may be set deeper in areas that the surface formation is not found

competent. This rig also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.

The air rig is then mobilized to drill the surface casing hole by drilling a 12-1/4 inch hole to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 12-1/4 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 9-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.

KMG fully appreciates Onshore Order 2 well control and safety requirements associated with a typical air drilling operations. However, the requirements of Onshore Order 2 are excessive with respect to the air rig layout and drilling operation procedures that are currently in practice to drill and control the surface casing hole in KMG Fields.

Variance for BOPE Requirements

The air rig operation utilizes a properly lubricated and maintained air bowl diverter system which diverts the drilling returns to a six-inch blooie line. The air bowl is the only piece of BOPE equipment which is installed during drilling operations and is sufficient to contain the air returns associated with this drilling operation. As was discussed earlier, the drilling of the surface hole does not encounter any over pressured or productive zones, and as a result standard BOPE equipment should not be required. In addition, standard drilling practices do not support the use of BOPE on 40 feet of conductor pipe.

Variance for Mud Material Requirements

Onshore Order 2 also states that sufficient quantities of mud materials shall be maintained or readily accessible for the purpose of assuring adequate well control. Once again, the surface hole drilling operations does not encounter over pressured or productive intervals, and as a result there is not a need to control pressure in the surface hole with a mud system. Instead of mud, the air rigs utilize water from the reserve pit for well control, if necessary. A skid pump which is located near the reserve pit (see attachment) will supply the water to the well bore.

Variance for Special Drilling Operation (surface equipment placement) Requirements Onshore Order 2 requires specific safety distances or setbacks for the placement of associated standard air drilling equipment, wellbore, and reserve pits. The air rigs used to drill the surface holes are not typical of an air rig used to drill a producing hole in other parts of the US. These are smaller in nature and designed to fit a KMG location. The typical air rig layout for drilling surface hole in the field is attached.

Typically the blooie line discharge point is required to be 100 feet from the well bore. In the case of a KMG well, the reserve pit is only 45 feet from the rig and is used for the drill cuttings. The blooie line, which transports the drill cuttings from the well to the reserve pit, subsequently discharges only 45 feet from the well bore.

Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors (see

attachment) are located on the rig (1250 cfm) and on a standby trailer (1170 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.

Lastly, Onshore Order 2 addresses the need for an automatic igniter or continuous pilot light on the blooie line. The air rig does not utilize an igniter as the surface hole drilling operation does not encounter productive formations.

Variance for FIT Requirements

KMG also respectfully requests a variance to Onshore Order 2, Section III, Part Bi, for the pressure integrity test (PIT, also known as a formation integrity test (FIT)). The air rig operation utilizes a 5M BOPE when drilling. This well is not an exploratory well and is being drilled in an area where the formation integrity is well known. Additionally, when an FIT is run with the mud weight as required, the casing shoe frequently breaks down and causes subsequent lost circulation when drilling the entire depth of the well.

Conclusion

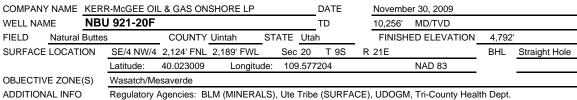
The air rig operating procedures and the attached air rig layout have effectively maintained well control while drilling the surface holes in KMG Fields. KMG respectfully requests a variance from Onshore Order 2 with respect to air drilling well control requirements as discussed above.

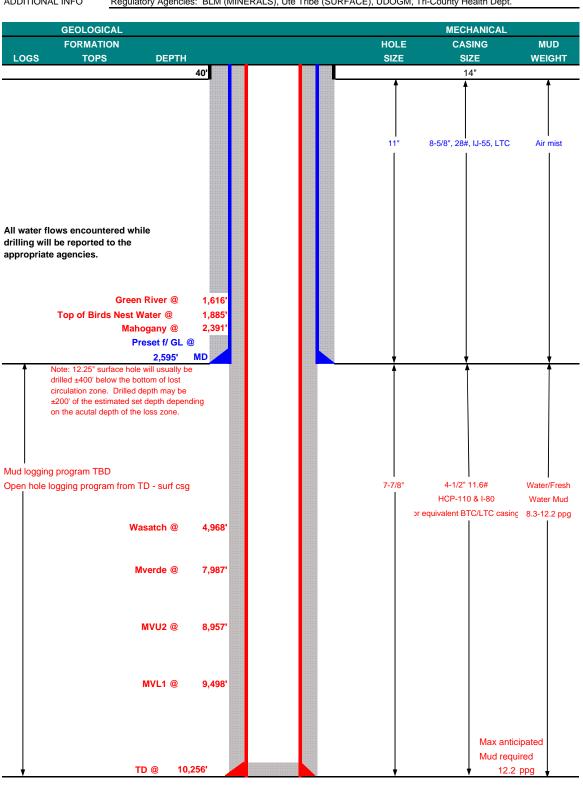
10. Other Information:

Please refer to the attached Drilling Program.



KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM







KERR-McGEE OIL & GAS ONSHORE LP

DRILLING PROGRAM

CASING PROGRAM

									ESIGN FACT	ORS
	SIZE	INT	ERVA	L	WT.	GR.	CPLG.	BURST	COLLAPSE	TENSION
CONDUCTOR	14"	C)-40'							
								3,390	1,880	348,000
SURFACE	8-5/8"	0	to	2595	28.00	IJ-55	LTC	0.80*	1.55	4.79
								7,780	6,350	278,000
PRODUCTION	4-1/2"	0	to	9600	11.60	I-80	BTC	1.83	1.04	2.87
								10,690	8,650	279,000
		9600	to	10256	11.60	HCP-110	LTC	2.52	1.33	45.07

*Burst on suface casing is controlled by fracture gradient as shoe with gas gradient above.

D.F. = 2.07

- 1) Max Anticipated Surf. Press.(MASP) (Surf Csg) = (Pore Pressure at next csg point-(0.22 psi/ft-partial evac grad x TVD of next csg point))
- 2) MASP (Prod Casing) = Pore Pressure at TD (0.22 psi/ft-partial evac gradient x TD)

(Burst Assumptions: TD = 12.2 ppg)

(Collapse Assumption: Fully Evacuated Casing, Max MW)

0.22 psi/ft = gradient for partially evac wellbore

(Collapse Assumption: Fully Evacuated Casing, Max MW)

(Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

MASP 4,133 psi

3) Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

(Burst Assumptions: TD = 12.2 ppg)

0.62 psi/ft = bottomhole gradient

(Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

MABHP 6,390 psi

CEMENT PROGRAM

	FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE LEAD	500'	Premium cmt + 2% CaCl	215	60%	15.60	1.18
Option 1		+ 0.25 pps flocele				
TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	260	0%	15.60	1.18
		+ 2% CaCl + 0.25 pps flocele				
		Premium cmt + 2% CaCl				
SURFACE		NOTE: If well will circulate water to sur	face, optic	n 2 will be	utilized	
Option 2 LEAD	2,095'	Prem cmt + 16% Gel + 10 pps gilsonite	190	35%	11.00	3.82
		+ 0.25 pps Flocele + 3% salt BWOC				
TAIL	500	Premium cmt + 2% CaCl	150	35%	15.60	1.18
		+ 0.25 pps flocele				
TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.60	1.18
PRODUCTION LEAD	4,466'	Premium Lite II + 0.25 pps celloflake +	360	40%	11.00	3.38
		5 pps gilsonite + 10% gel '+ 1% Retarder				
TAIL	5,790'	50/50 Poz/G + 10% salt + 2% gel	1,420	40%	14.30	1.31
		+ 0.1% R-3				

^{*}Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

FLOAT EQUIPMENT & CENTRALIZERS

SURFACE

Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe.

PRODUCTION

Float shoe, 1 jt, float collar. Centralize first 3 joints & every third joint for a total of 15 bow spring centralizers.

ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

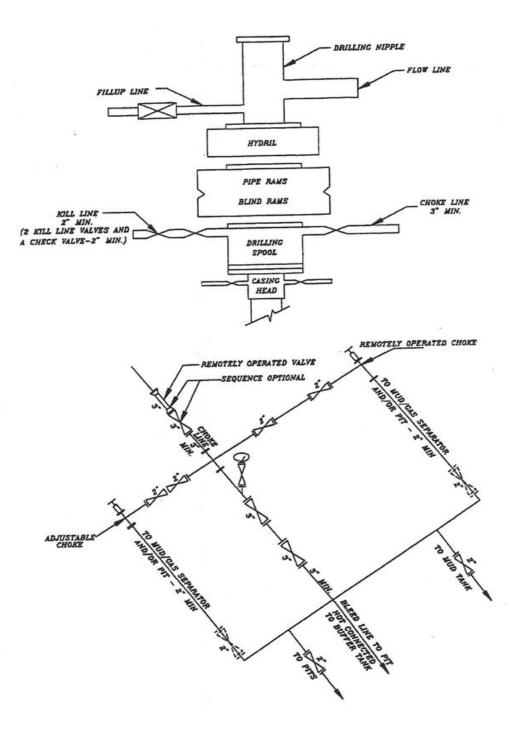
Drop Totco surveys every 2000'. Maximum allowable hole angle is 5 degrees.

Most rigs have PVT Systems for mud monitoring. If no PVT is available, visual monitoring will be utililzed.

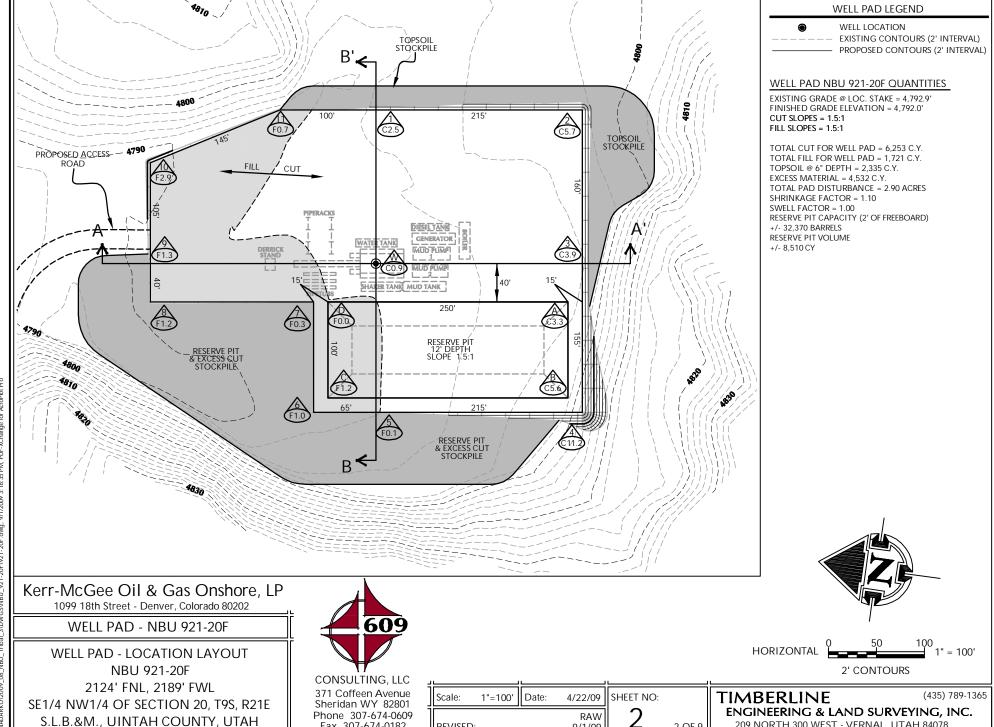
DRILLING ENGINEER:		DATE:	
	John Huycke / Emile Goodwin	•	
DRILLING SUPERINTENDENT:		DATE:	
	John Merkel / Lovel Young	-	

^{*}Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

EXHIBIT A NBU 921-20F



SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK



Fax 307-674-0182

REVISED:

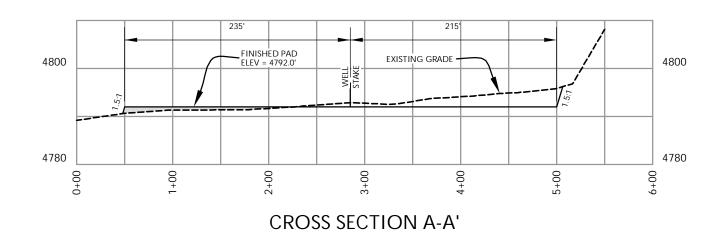
209 NORTH 300 WEST - VERNAL, UTAH 84078

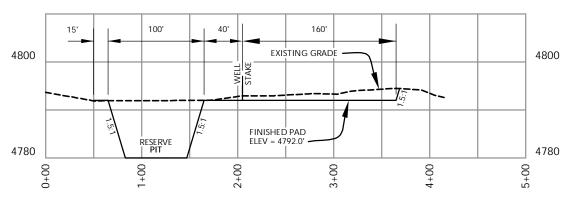
2 OF 9

9/1/09

APIWeIINo:430475083500003 K:ANADARKON2009 08 NBU Tribal 3/DWGSNUBU 921-20F/921







CROSS SECTION B-B'

REVISED:

Kerr-McGee Oil & Gas Onshore, LP 1099 18th Street - Denver, Colorado 80202

WELL PAD - NBU 921-20F

WELL PAD - CROSS SECTIONS NBU 921-20F 2124' FNL, 2189' FWL SE1/4 NW1/4 OF SECTION 20, T9S, R21E S.L.B.&M., UINTAH COUNTY, UTAH



CONSULTING, LLC 371 Coffeen Avenue Sheridan WY 82801 Phone 307-674-0609 Fax 307-674-0182

	ı		ı	-	VERTICAL 🔄
Scale: 1"=100'	Date: 4	/22/09	SHEET NO:		TIMBERLINE
REVISED:		RAW 9/1/09	3	3 OF 9	ENGINEERING & L 209 NORTH 300 WEST

HORIZONTAL

(435) 789-1365

ENGINEERING & LAND SURVEYING, INC. 209 NORTH 300 WEST - VERNAL, UTAH 84078

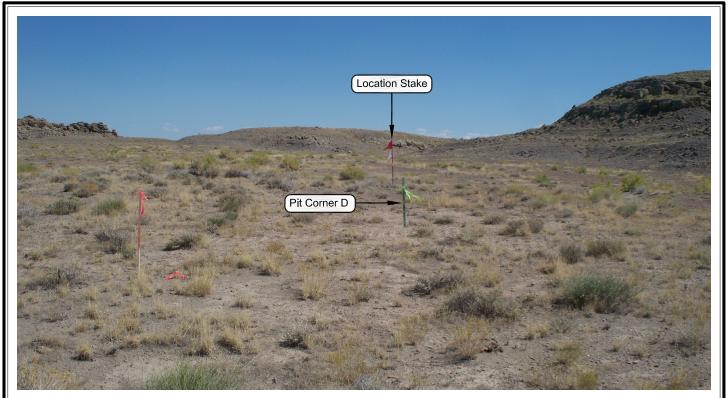


PHOTO VIEW: FROM PIT CORNER D TO LOCATION STAKE





PHOTO VIEW: FROM BEGINNING OF PROPOSED ROAD

CAMERA ANGLE: EASTERLY

Kerr-McGee Oil & Gas Onshore, LP 1099 18th Street - Denver, Colorado 80202

Well Pad - NBU 921-20F

NBU 921-20F **LOCATION PHOTOS** 2124' FNL, 2189' FWL SE $\frac{1}{4}$ NW $\frac{1}{4}$ OF SECTION 20, T9S, R21E, S.L.B.&M., UINTAH COUNTY, UTAH.



CONSULTING, LLC 371 Coffeen Avenue

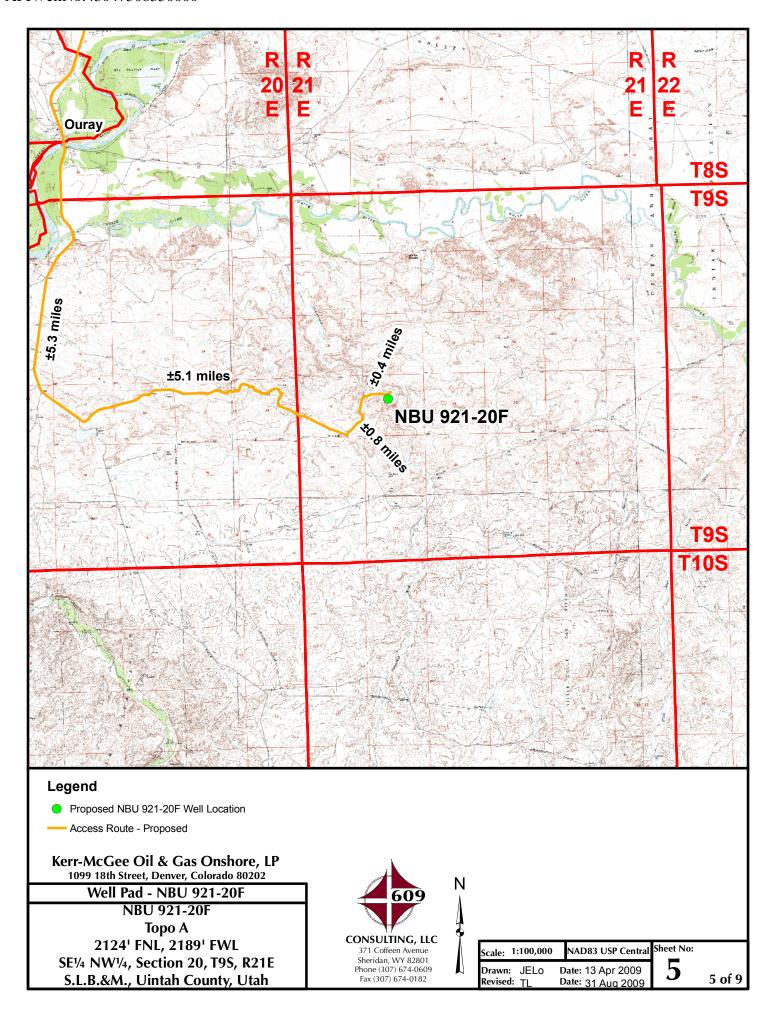
Sheridan WY 82801 Phone 307-674-0609 Fax 307-674-0182

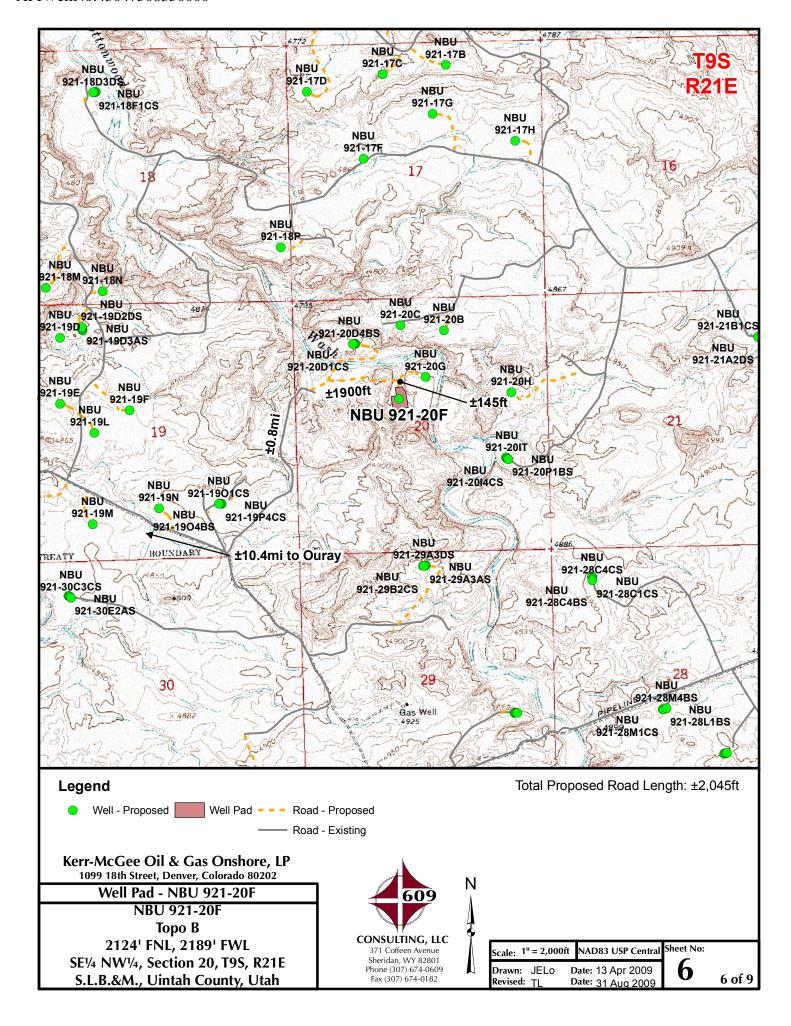
TIMBERLINE

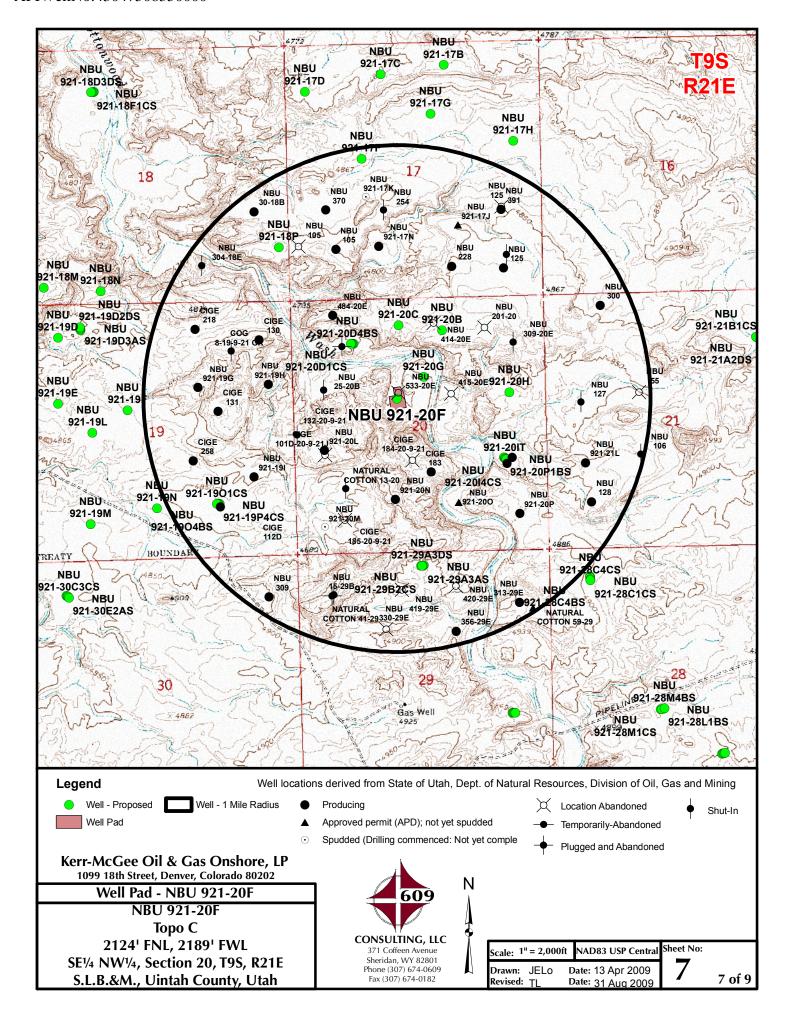
(435) 789-1365

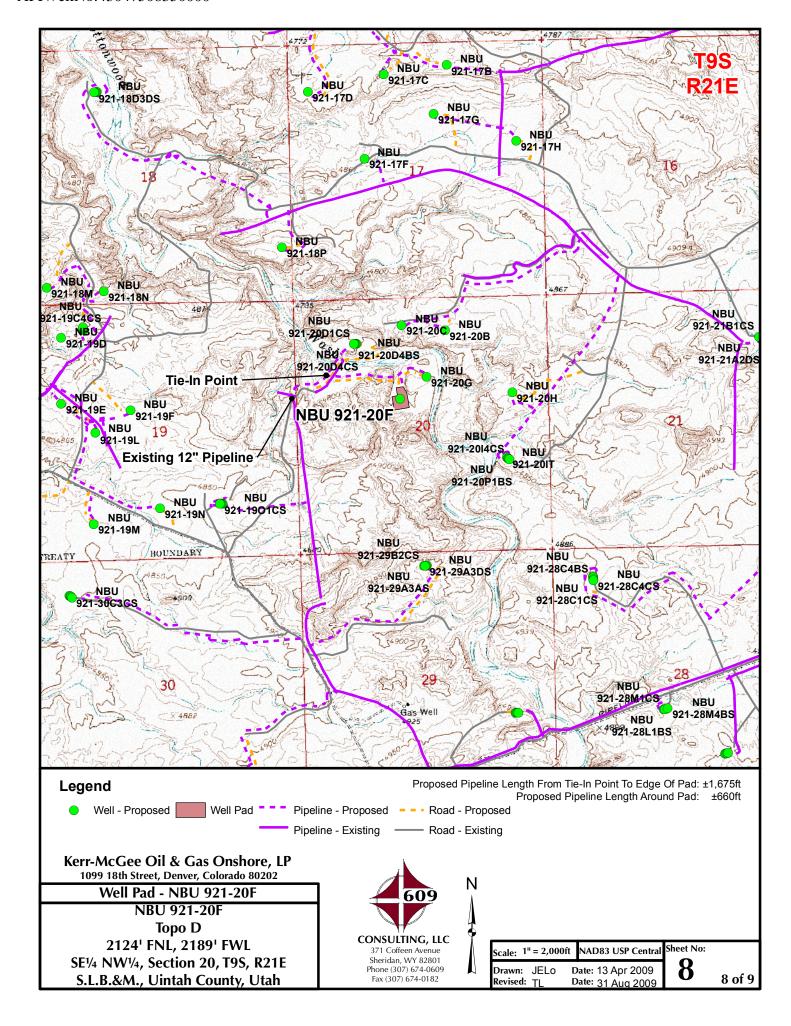
ENGINEERING & LAND SURVEYING, INC. 209 NORTH 300 WEST - VERNAL, UTAH 84078

ı		,,	*
	DATE PHOTOS TAKEN:	PHOTOS TAKEN BY: M.S.B.	SHEET NO:
l	04-15-09		_
	DATE DRAWN:	DRAWN BY: M.W.W.	1
	04-16-09		_
l	Date Last Revised: 08-28-09	9	4 OF 9









Kerr-McGee Oil & Gas Onshore, LP WELL PAD - NBU 921-20F WELL - NBU 921-20F Section 20, T9S, R21E, S.L.B.&M.

PROCEED IN A WESTERLY DIRECTION FROM VERNAL. UTAH ALONG U.S. HIGHWAY 40 APPROXIMATELY 13.9 MILES TO THE JUNCTION OF STATE HIGHWAY EXIT LEFT AND PROCEED IN A SOUTHERLY DIRECTION ALONG STATE HIGHWAY 88 APPROXIMATELY 16.8 MILES TO OURAY, UTAH. FROM OURAY, PROCEED IN A SOUTHERLY DIRECTION ALONG THE SEEP RIDGE ROAD (COUNTY B ROAD 2810) APPROXIMATELY 5.3 MILES TO THE INTERSECTION OF A SERVICE ROAD TO THE EAST. EXIT LEFT AND PROCEED IN A NORTHEASTERLY THEN SOUTHEASTERLY DIRECTION ALONG THE SERVICE ROAD APPROXIMATELY 5.1 MILES TO A SECOND SERVICE ROAD TO THE NORTHEAST. EXIT LEFT AND PROCEED IN A NORTH BY NORTHEAST DIRECTION ALONG THE SECOND SERVICE ROAD APPROXIMATELY 0.8 MILES TO THE PROPOSED ACCESS ROAD. FOLLOW FLAGS IN A NORTHEASTERLY, THEN EASTERLY DIRECTION APPROXIMATELY 2,045 FEET TO THE PROPOSED LOCATION.

TOTAL DISTANCE FROM VERNAL, UTAH TO THE WELL LOCATION IS APPROXIMATELY 42.3 MILES IN A SOUTHERLY DIRECTION.

NBU 921-20F

Surface: 2,124' FNL 2,189' FWL (SE/4NW/4) Sec. 20 T9S R21E

Uintah, Utah Mineral Lease: UTU 0575 Surface Owner: Ute Indian Tribe Operator: Kerr-McGee Oil & Gas Onshore LP

ONSHORE ORDER NO. 1

MULTI-POINT SURFACE USE & OPERATIONS PLAN SUBMITTED WITH SITE-SPECIFIC INFORMATION

This Application for Permit to Drill (APD) is filed under the Notice of Staking (NOS) process as stated in Onshore Order No. 1 (OSO #1) and supporting Bureau of Land Management (BLM) and Bureau of Indian Affairs (BIA) documents. An NOS was submitted showing the surface location in SE/4 NW/4 of Section 20 T9S R21E.

This Surface Use Plan of Operations (SUPO) or 13-point plan provides the site-specific information for the above-referenced wells. This information is to be incorporated by reference into the Master Development Plan (MDP) for Kerr-McGee Oil & Gas Onshore LP (Kerr-McGee). The MDP is available upon request from the BIA-Ft Duchesne Office.

An on-site meeting was held on September 1, 2009. Present were:

- Verlyn Pindell, Dave Gordon BLM;
- Bucky Secakuku BIA
- Bradley Pinnecoose Ute Indian Tribe
- Scott Carson Smiling Lake Consulting, Inc.
- Kolby Kay, Mitch Batty 609 Consulting, LLC
- Nick Hall Grasslands Consulting, Inc.
- Hal Blanchard, Charles Chase, Tony Kazeck and Raleen White Kerr-McGee.

1. Existing Roads:

- A) Refer to Topo Map A for directions to the location.
- B) Refer to Topo Maps A and B for location of access roads within a 2-mile radius.

2. Planned Access Roads:

See MDP for additional details on road construction.

Approximately $\pm 2,045$ ' (± 0.39 miles) of new access road is proposed. Please refer to the attached Topo Map B. No pipelines will be crossed with the new construction.

Page 2

Existence of pipelines; maximum grade; turnouts; major cut and fills, culverts, or bridges; gates, cattle guards, fence cuts, or modifications to existing facilities were determined at the on-site and are typically shown on the attached Exhibits and Topo maps.

3. Location of Existing Wells Within a 1-Mile Radius:

Please refer to Topo Map C.

4. Location of Existing and Proposed Facilities:

See MDP for additional details on Existing and Proposed Facilities.

The following guidelines will apply if the well is productive.

Approximately $\pm 2,335$ ' (± 0.44 miles) of pipeline is proposed. Please refer to Topo D for the existing pipeline. Appropriate surface use agreements have been or will be obtained from the Ute Indian Tribe. Pipeline segments will be welded or zaplocked together on disturbed areas in or near the location, whenever possible, and dragged into place

Based on the comments from the onsite, Kerr-McGee has agreed to the following:

- Construct a low-water crossing on access road
- Re-route the washes around the well pad
- Arch Monitor
- Raptor Survey to ensure the existing nest to the north of the pad is not active

5. Location and Type of Water Supply:

See MDP for additional details on Location and Type of Water Supply.

Water for drilling purposes will be obtained from one of the following sources:

- Dalbo Inc.'s underground well located in Ouray, Utah, Sec. 32 T4S R3E, Water User Claim number 43-8496, application number 53617.
- Price Water Pumping Inc. Green River and White River, various sources, Water Right Number 49-1659, application number: a35745.

No water well is to be drilled on this lease.

6. Source of Construction Materials:

See MDP for additional details on Source of Construction Materials.

7. <u>Methods of Handling Waste Materials</u>:

See MDP for additional details on Methods of Handling Waste Materials.

Any produced water from the proposed well will be contained in a water tank and will then be hauled by truck to one of the pre-approved disposal sites:

NBU 921-20F

RNI in Sec. 5 T9S R22E

NBU #159 in Sec. 35 T9S R21E Ace Oilfield in Sec. 2 T6S R20E MC&MC in Sec. 12 T6S R19E Pipeline Facility in Sec. 36 T9S R20E

Goat Pasture Evaporation Pond in SW/4 Sec. 16 T10S R22E

Bonanza Evaporation Pond in Sec. 2 T10S R23E

8. <u>Ancillary Facilities</u>:

See MDP for additional details on Ancillary Facilities.

None are anticipated.

9. Well Site Layout: (See Location Layout Diagram)

See MDP for additional details on Well Site Layout.

All pits will be fenced according to the following minimum standards:

- Net wire (39-inch) will be used with at least one strand of barbed wire on top of the net wire. Barbed wire is not necessary if pipe or some type of reinforcement rod is attached to the top of the entire fence.
- The net wire shall be no more than two inches above the ground. The barbed wire shall be three inches over the net wire. Total height of the fence shall be at least 42 inches.
- Corner posts shall be cemented and/or braced in such a manner to keep the fence tight at all times.
- Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distance between any 2 fence posts shall be no greater than 16 feet.
- All wire shall be stretched, by using a stretching device, before it is attached to corner posts.

10. Plans for Reclamation of the Surface:

See MDP for additional details on Plans for Reclamation of the Surface.

Kerr-McGee shall call the BIA for the seed mixture prior to starting interim and/or final reclamation actions.

11. Surface/Mineral Ownership:

The well pad and access road are located on lands owned by:

Ute Indian Tribe PO Box 70 Fort Duchesne, Utah 84026 435-722-5141

NBU 921-20F

The mineral ownership is listed below:
United States of America
Bureau of Land Management
170 South 500 East
Vernal, UT 84078
435-781-4400

12. Other Information:

See MDP for additional details on Other Information.

13. Lessee's or Operators' Representative & Certification:

Kathy Schneebeck Dulnoan Staff Regulatory Analyst Kerr-McGee Oil & Gas Onshore LP PO Box 173779 Denver, CO 80217-3779 (720) 929-6007 Tommy Thompson General Manager, Drilling Kerr-McGee Oil & Gas Onshore LP PO Box 173779 Denver, CO 80217-3779 (720) 929-6724

Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

The Operator will be fully responsible for the actions of its subcontractors. A complete copy of the approved "Application for Permit to Drill" will be furnished to the field representative(s) to ensure compliance and shall be on location during all construction and drilling operations.

Kerr-McGee Oil & Gas Onshore LP is considered to be the operator of the subject well. Kerr-McGee Oil & Gas Onshore LP agrees to be responsible under terms and conditions of the lease for the operations conducted upon leased lands.

Bond coverage pursuant to 43 CFR 3104 for lease activities is being provided by Bureau of Land Management Nationwide Bond WYB000291.

I hereby certify that I, or persons under my supervision, have inspected the proposed drill site and access route, that I am familiar with the conditions that currently exist; that I have full knowledge of the State and Federal laws applicable to this operation; that the statements made in this plan are, to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

Kathy Schneebeck Dulnoan

November 30, 2009

Date

CLASS I REVIEW OF KERR-MCGEE OIL & GAS ONSHORE LP'S 20 PROPOSED WELL LOCATIONS (T9S, R21E, SEC. 8, 10, 11, 12, 17, 18, 19, AND 20) IN UINTAH COUNTY, UTAH

By:

Patricia Stavish

Prepared For:

Ute Tribal Land Uintah and Ouray Agency

Prepared Under Contract With:

Kerr-McGee Oil & Gas Onshore LP 1368 South 1200 East Vernal, Utah 84078

Prepared By:

Montgomery Archaeological Consultants, Inc. P.O. Box 219 Moab, Utah 84532

MOAC Report No. 09-39b

October 9, 2009

United States Department of Interior (FLPMA)
Permit No. 09-UT-60122

Ute Tribal Permit No. A09-363

Paleontological Reconnaissance Survey Report

Survey of Kerr McGee's Proposed Well Pads, Access Roads, and Pipelines for "NBU #921-18M, 18N, 19F, 20F, & 20H" (Sec. 18-21, T 9 S, R 21 E)

Ouray SE Topographic Quadrangle Uintah County, Utah

June 18, 2009

Prepared by Stephen D. Sandau Paleontologist for Intermountain Paleo-Consulting P. O. Box 1125 Vernal, Utah 84078



Grasslands Consulting, Inc.

4800 Happy Canyon Road, Suite 110, Denver, CO 80237 (303) 759-5377 Office (303) 759-5324 Fax

SPECIAL STATUS PLANT AND WILDLIFE SPECIES REPORT

Report Number: GCI #95

Operator: Kerr-McGee Oil & Gas Onshore LP

Wells: NBU 921-20D (Bores: NBU 921-20D1CS, NBU 921-20D4BS, NBU 921-20D4CS, and

NBU 921-20B3CS), NBU 921-20F, and NBU 921-20G

Pipeline: Associated pipelines leading to proposed well pads

Access Road: Associated access roads leading to proposed well pads

Location: Section 20, Township 9 South, Range 21 East; Uintah County, Utah

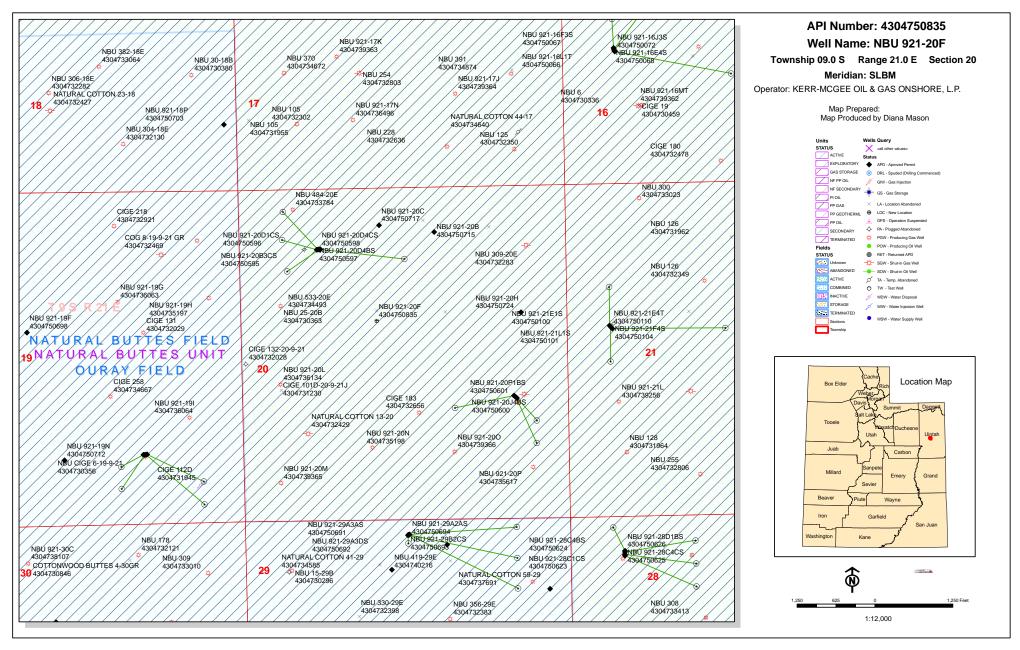
Survey-Species: Uinta Basin Hookless Cactus (*Sclerocactus wetlandicus*)

Date: June 16, June 25, and August 26, 2009

Observers: Grasslands Consulting, Inc. Biologists: Chris Gayer, Nick Hall, Dan Hamilton,

Jonathan Sexauer, and Garrett Peterson.

Weather: Partly cloudy, 80-90°F, 0-5 mph winds with no precipitation.



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Utah State Office P.O. Box 45155 Salt Lake City, Utah 84145-0155

IN REPLY REFER TO: 3160 (UT-922)

December 4, 2009

Memorandum

To: Assistant District Manager Minerals, Vernal District

From: Michael Coulthard, Petroleum Engineer

Subject: 2009 Plan of Development Natural Buttes Unit

Uintah County, Utah.

Pursuant to email between Diana Whitney, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following wells are planned for calendar year 2009 within the Natural Buttes Unit, Uintah County, Utah.

API # WELL NAME LOCATION

(Proposed PZ WASATCH-MESA VERDE)

43-047-50831 NBU 922-32M1AS Sec 32 T09S R22E 1160 FSL 2283 FWL BHL Sec 32 T09S R22E 1128 FSL 1074 FWL

43-047-50832 NBU 922-32M1CS Sec 32 T09S R22E 1147 FSL 2268 FWL BHL Sec 32 T09S R22E 0872 FSL 0726 FWL

43-047-50833 NBU 922-32N4AS Sec 32 T09S R22E 1187 FSL 2313 FWL BHL Sec 32 T09S R22E 0554 FSL 2572 FWL

43-047-50834 NBU 922-32N4CS Sec 32 T09S R22E 1174 FSL 2299 FWL BHL Sec 32 T09S R22E 0310 FSL 2234 FWL

43-047-50835 NBU 921-20F Sec 20 T09S R21E 2124 FNL 2189 FWL

43-047-50836 NBU 921-20G Sec 20 T09S R21E 1684 FNL 2530 FEL

This office has no objection to permitting the wells at this time.

/s/ Michael L. Coulthard

bcc: File - Natural Buttes Unit
 Division of Oil Gas and Mining

Central Files Agr. Sec. Chron Fluid Chron

MCoulthard:mc:12-4-09

WORKSHEET APPLICATION FOR PERMIT TO DRILL

APD RECEIVED:	12/1/2009		API NO. ASSIGNED:	43047508350000
WELL NAME:	NBU 921-20F			
OPERATOR:	KERR-MCGEE OIL & C	GAS ONSHORE, L.P. (N2995)	PHONE NUMBER:	720 929-6156
CONTACT:	Danielle Piernot			
PROPOSED LOCATION:	SENW 20 090S 210E		Permit Tech Review:	
SURFACE:	2124 FNL 2189 FWL		Engineering Review:	
воттом:	2124 FNL 2189 FWL		Geology Review:	
COUNTY:	UINTAH			
LATITUDE:	40.02292		LONGITUDE:	-109.57643
UTM SURF EASTINGS:	621480.00		NORTHINGS:	4431061.00
FIELD NAME:	NATURAL BUTTES			
LEASE TYPE:	1 - Federal			
LEASE NUMBER:	UTU 0575 PR	ROPOSED PRODUCING FORM	ATION(S): WASATCH-MES	A VERDE
SURFACE OWNER:	2 - Indian		COALBED METHANE:	NO
RECEIVED AND/OR REVIE	:WED:	LOCATION AND SITI	NG:	
₽ PLAT		R649-2-3.		
Bond: FEDERAL - WYB	000291	Unit: NATURAL BU	TTES	
Potash		R649-3-2. Gener	ral	
✓ Oil Shale 190-5				
Oil Shale 190-3		R649-3-3. Excep	otion	
Oil Shale 190-13		Drilling Unit		
Water Permit: Permit	#43-8496	Board Cause N	o: Cause 173-14	
RDCC Review:		Effective Date:	12/2/1999	
Fee Surface Agreeme	ent	Siting: 460' fr	u bdry & uncomm. tract	
✓ Intent to Commingle		R649-3-11. Dire	ctional Drill	
Commingling Approved	i			
Comments: Presite Co	ompleted			

Stipulations:

3 - Commingling - ddoucet 4 - Federal Approval - dmason 17 - Oil Shale 190-5(b) - dmason

	STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES		FORM 9		
	5.LEASE DESIGNATION AND SERIAL NUMBER: UTU 0575				
SUNDF	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Ute Tr				
	sals to drill new wells, significantly deepen e ugged wells, or to drill horizontal laterals. Us		7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES		
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 921-20F		
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONS	HORE, L.P.		9. API NUMBER: 43047508350000		
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th S	PHON Street, Suite 600, Denver, CO, 80217 3779	E NUMBER: 720 929-6007 Ext	9. FIELD and POOL or WILDCAT: NATURAL BUTTES		
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2124 FNL 2189 FWL			COUNTY: UINTAH		
QTR/QTR, SECTION, TOWNSHI	IP, RANGE, MERIDIAN: Township: 09.0S Range: 21.0E Meridian: S		STATE: UTAH		
11. CHE	CK APPROPRIATE BOXES TO INDICATE	NATURE OF NOTICE, REPORT,	OR OTHER DATA		
TYPE OF SUBMISSION		TYPE OF ACTION			
_	☐ ACIDIZE [ALTER CASING	CASING REPAIR		
NOTICE OF INTENT Approximate date work will start:	☐ CHANGE TO PREVIOUS PLANS	CHANGE TUBING	☐ CHANGE WELL NAME		
12/29/2010	☐ CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE		
SUBSEQUENT REPORT	☐ DEEPEN [FRACTURE TREAT	☐ NEW CONSTRUCTION		
Date of Work Completion:	☐ OPERATOR CHANGE	PLUG AND ABANDON	☐ PLUG BACK		
_	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION		
SPUD REPORT Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON		
	☐ TUBING REPAIR	VENT OR FLARE	☐ WATER DISPOSAL		
DRILLING REPORT	□ WATER SHUTOFF [SI TA STATUS EXTENSION	✓ APD EXTENSION		
Report Date:		OTHER	OTHER:		
			<u></u>		
Kerr-McGee Oil & G extension to this A	DAPPLETED OPERATIONS. Clearly show all perti- ias Onshore, L.P. (Kerr-McGee) APD for the maximum time allow with any questions and/or com	respectfully requests an wed. Please contact the	Approved by the Utah Division of Oil, Gas and Mining		
			12/30/2010		
		D	ate: 12/30/2010		
By: Bally III					
			7-3		
NAME (PLEASE PRINT)	PHONE NUMBER	TITLE			
Danielle Piernot	720 929-6156	Regulatory Analyst			
SIGNATURE N/A		DATE 12/29/2010			



The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

Request for Permit Extension Validation Well Number 43047508350000

API: 43047508350000 **Well Name:** NBU 921-20F

Location: 2124 FNL 2189 FWL QTR SENW SEC 20 TWNP 090S RNG 210E MER S

Company Permit Issued to: KERR-MCGEE OIL & GAS ONSHORE, L.P.

Date Original Permit Issued: 12/28/2009

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision. Following is a checklist of some items related to the application, which should be verified.

require revi	sion. Following is a checl	klist of some iter	ns related to the	application,	which should be verified.			
	ated on private land, has ed? 🔵 Yes 📵 No	the ownership o	hanged, if so, ha	s the surfac	e agreement been			
	any wells been drilled in requirements for this lo			which would	d affect the spacing or			
	nere been any unit or oth s proposed well? () Ye		out in place that	could affect	the permitting or operation			
	 Have there been any changes to the access route including ownership, or rightof- way, which could affect the proposed location? Yes No 							
• Has tl	ne approved source of wa	ater for drilling c	hanged? 🔵 Ye	es 📵 No				
	there been any physical of the contract was the contract was a contract with the contract was a contract with the contract was a contract was a contract was a contract with the contract was a contract was a contract with the contract was a contract was a contract was a contract was a contract with the contract was a contract with t				te which will require a es 📵 No			
• Is bor	nding still in place, which	covers this prop	oosed well? 🌘		Approved by the Utah Division of Oil, Gas and Mining			
Signature:	Danielle Piernot	Date: 12/29/2	2010		. 12/30/2010			
ı itie:	Regulatory Analyst Repre	senting: KERR-M	CGEE UIL & GAS (JNSHUKEPL.	R OCEMAN			

RECEIVED

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

DEC & 2009

FORM APPROVED OMB No. 1004-0136 Expires July 31, 2010

APPLICATION FOR PERMIT TO DRILL OR REENT A

Expires July 31, 2010

UTU0575

1a. Type of Work: DRILL REENTER		7. If Unit or CA Agreement, 891008900A	Name and No.		
lb. Type of Well: ☐ Oil Well ☐ Gas Well ☐ Otl	ner Single Zone 🔀 Multiple Zone	Lease Name and Well No. NBU 921-20F			
2. Name of Operator Contact: KERRMCGEE OIL&GAS ONSHORE-NM: Danielle	9. API Well No. 43 047 50835				
3a. Address PO BOX 173779 DENVER, CO 80202-3779	3b. Phone No. (include area code) Ph: 720-929-6156 Fx: 720-929-7156 10. Field and Pool, or Exploratory NATURAL BUTTES				
4. Location of Well (Report location clearly and in accordance with any State requirements.*) 11. Sec., T., R., M., or Blk. and Survey or					
At surface SENW 2124FNL 2189FWL	Sec 20 T9S R21E Me	er SLB			
At proposed prod. zone SENW 2124FNL 2189FWL					
14. Distance in miles and direction from nearest town or post APPROXIMATELY 11 MILES SOUTHEAST OF	office* OURAY, UTAH	12. County or Parish UINTAH	13. State UT		
 Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 2124 FEET 	16. No. of Acres in Lease 1600.00	17. Spacing Unit dedicated to	this well		
18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft.		20. BLM/BIA Bond No. on file			
APPROXIMATELY 750 FEET	10256 MD 10256 TVD	WYB000291			
21. Elevations (Show whether DF, KB, RT, GL, etc. 4793 GL	22. Approximate date work will start 12/28/2009	23. Estimated duration 60-90 DAYS			
24. Attachments					
The following, completed in accordance with the requirements of	of Onshore Oil and Gas Order No. 1, shall be attached to	this form:			
 Well plat certified by a registered surveyor. A Drilling Plan. A Surface Use Plan (if the location is on National Forest Syst SUPO shall be filed with the appropriate Forest Service Of 	formation and/or plans as may b				
25. Signature (Electronic Submission)	Name (Printed/Typed) DANIELLE E PIERNOT Ph: 720-929-6156 Date 12/04/2009				
Title REGULATORY ANALYST I	1.				
Approved by (Signature)	Name (Printed/Typed) Jerry Kenczka NOV 0 7 2011				
Assistant Field Manager Lands & Mineral Resources	Office VERNAL FIELD OFFICE				
Application approval does not warrant or certify the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon. Conditions of approval, if any, are attached. CONDITIONS OF APPROVAL ATTACHED					
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212,	make it a crime for any person knowingly and willfully	to make to any department or as	ency of the United		

Additional Operator Remarks (see next page)

Electronic Submission #78398 verified by the BLM Well Information System
For KERRMCGEE OIL&GAS ONSHORE LP, sent to the Vernal
Committed to AFMSS for processing by GAIL JENKINS on 12/08/2009 ()

NOTICE OF APPROVAL

NOV 18 2011

DIV. OF OIL, GAS & MINING

* OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED **

106-XJ0969AE

States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

NO NOS



UNITED STATES DEPARTMENT OF THE INTERIOR **BUREAU OF LAND MANAGEMENT VERNAL FIELD OFFICE**

VERNAL, UT 84078

(435) 781-4400



CONDITIONS OF APPROVAL FOR APPLICATION FOR PERMIT TO DRILL

Company:

Kerr McGee Oil & Gas Onshore

Well No: API No:

NBU 921-20F

43-047-50835

Location:

Sec. 20, T9S, R21E

Lease No: UTU-0575

Agreement:

Natural Buttes Unit

OFFICE NUMBER:

(435) 781-4400

OFFICE FAX NUMBER: (435) 781-3420

A COPY OF THESE CONDITIONS SHALL BE FURNISHED TO YOUR FIELD REPRESENTATIVE TO INSURE COMPLIANCE

All lease and/or unit operations are to be conducted in such a manner that full compliance is made with the applicable laws, regulations (43 CFR Part 3160), and this approved Application for Permit to Drill including Surface and Downhole Conditions of Approval. The operator is considered fully responsible for the actions of his subcontractors. A copy of the approved APD must be on location during construction, drilling, and completion operations. This permit is approved for a two (2) year period, or until lease expiration, whichever occurs first. An additional extension, up to two (2) years, may be applied for by sundry notice prior to expiration.

NOTIFICATION REQUIREMENTS

Construction Activity (Notify Ute Tribe Energy & Minerals Dept. and BLM Environmental Scientist)	-	The Ute Tribe Energy & Minerals Dept. and BLM Environmental Scientist shall be notified at least 48 hours in advance of any construction activity. The Ute Tribal office is open Monday through Thursday.
Construction Completion (Notify Ute Tribe Energy & Minerals Dept. and BLM Environmental Scientist)	-	Upon completion of the pertinent APD/ROW construction, notify the Ute Tribe Energy & Minerals Dept. for a Tribal Technician to verify the Affidavit of Completion. Notify the BLM Environmental Scientist prior to moving on the drilling rig.
Spud Notice (Notify BLM Petroleum Engineer)	-	Twenty-Four (24) hours prior to spudding the well.
Casing String & Cementing (Notify BLM Supv. Petroleum Tech.)	-	Twenty-Four (24) hours prior to running casing and cementing all casing strings to: <u>BLM_UT_VN_OpReport@blm.gov</u> .
BOP & Related Equipment Tests (Notify BLM Supv. Petroleum Tech.)	-	Twenty-Four (24) hours prior to initiating pressure tests.
First Production Notice (Notify BLM Petroleum Engineer)	-	Within Five (5) business days after new well begins or production resumes after well has been off production for more than ninety (90) days.

Page 2 of 7 Well: NBU 9221-20F 11/2/2011

SURFACE USE PROGRAM CONDITIONS OF APPROVAL (COAs)

- All new and replacement internal combustion gas field engines of less than or equal to 300 design-rated horsepower must not emit more than 2 gms of NO_x per horsepower-hour. This requirement does not apply to gas field engines of less than or equal to 40 design-rated horsepower.
- All and replacement internal combustion gas field engines of greater than 300 design rated horsepower must not emit more than 1.0 gms of NO_x per horsepower-hour.
- Paint facilities "Shadow Gray."
- Re-route ephemeral drainages around perimeter of the well pad.
- Construct low water crossing on access road at ephemeral wash.
- Monitor location by a permitted archaeologist during the construction process.
- Monitor location by a permitted paleontologist during the construction process.
- In accordance with the guidelines specified in the Utah BLM Field Office Guidelines for Raptor Protection from Human and Land Use Disturbances, 2002 a raptor survey shall be conducted prior to construction of the proposed location, pipeline, or access road if construction will take place during raptor nesting season (January 1 through September 30). If active raptor nests are identified during a new survey, KMG shall conduct its operations according to the seasonal restrictions detailed I the Uinta Basin-specific RMP guidelines and spatial offsets specified by the USFWS Utah Raptor Guidelines (See Appendix D). The USFWS recommends a ¼-mile avoidance buffer surrounding active burrowing owl nests between March 1 and August 31. The USFWS recommends a ¼-mile avoidance buffer surrounding active golden eagle nests between January 1 and August 31.
- Conduct a new biological survey in accordance with the guidelines specified in the USFWS
 Rare Plant Conservation Measures for Uinta Basin hookless Cactus and the 2008 BLM RMP
 ROD, to include a 300-foot buffer from proposed construction operations (See Appendix D), and
 conduct operations according to agency specifications and the requirements of the BO issued
 as a result of Section & USFWS consultation.

BIA Standard Conditions of Approval:

- Soil erosion will be mitigated by reseeding all disturbed areas.
- The gathering pipelines will be constructed to lie on the surface. The surface pipelines will not be bladed or cleared of vegetation. Where pipelines are constructed parallel to roads they may be welded on the road and then lifted from the road onto the right-of-way. Where pipelines do not parallel roads but cross-country between sites, they shall be welded in place at well sites or on access roads and then pulled between stations with a suitable piece of equipment. Traffic will be restricted along these areas so that the pipeline right-of-way will not be used as an access road.

Page 3 of 7 Well: NBU 9221-20F 11/2/2011

- An open drilling system shall be used, unless otherwise specified in 10.0 Additional Stipulations
 of this document and in the Application for Permit to Drill. A closed drilling system shall be used
 in all flood plain areas, and other highly sensitive areas, recommended by the Ute Tribe
 Technician, BIA, and other agencies involved.
- The reserve pit shall be lined with a synthetic leak proof liner. After the drilling operation is complete, excess fluids shall be removed from the reserve pit and either hauled to an approved disposal site or shall be used to drill other wells. When the fluids are removed the pit shall be backfilled a minimum of 3.0' below the soil surface elevation
- A closed production system shall be used. This means all produced water and oil field fluid wastes shall be contained in leak proof tanks. These fluids shall be disposed of in either approved injection wells or disposal pits.
- Major low water crossings will be armored with pit run material to protect them from erosion.
- All personnel shall refrain from collecting any paleontological fossils and from disturbing any fossil resources in the area.
- If fossils are exposed or identified during construction, all construction must cease and immediate notification to the Energy and Minerals Department and the Cultural Rights Protection Officer.
- Before the site is abandoned the company will be required to restore the right-of-way to near its
 original state. The disturbed area will be reseeded with desirable perennial vegetation. If
 necessary, the Bureau of Indian Affairs or Bureau of Land Management will provide a suitable
 seed mixture.
- Noxious weeds will be controlled on all surface disturbances within the project area. If noxious
 weeds spread from the project area onto adjoining land, the company will also be responsible
 for their control.
- If project construction operations are scheduled to occur after December 31, 2009, KMG shall conduct annual raptor surveys in accordance with the guidelines specified in the Utah Field Office Guidelines for Raptor Protection from Human and Land Use Disturbances, 2002. If active raptor nest are indentified during a new survey, KMG shall conduct its operations according to the seasonal restrictions detailed in the Uinta basin-specific RMP guidelines and spatial offsets specified by the USFWS Utah Raptor Gui9ldlines (See Appendix D).
- USFWS threatened and endangered plant and animal conservation measures will be followed, as appropriate to the species identified by the biological resource survey (See Appendix D).
- All personnel shall refrain from collecting artifacts and from disturbing any significant cultural resources in the area.
- If artifacts or any culturally sensitive materials are exposed or identified during construction, all
 construction must cease and immediate notification to the Energy and Minerals Department and
 the Cultural Rights Protection Officer.

Page 4 of 7 Well: NBU 9221-20F 11/2/2011

DOWNHOLE PROGRAM CONDITIONS OF APPROVAL (COAs)

SITE SPECIFIC DOWNHOLE COAs:

A Gama Ray Log shall be run from TD to surface.

Variances Granted:

Air Drilling:

- Properly lubricated and maintained rotating head, variance granted to use a properly maintained and lubricated diverter bowl in place of a rotating head.
- Blooie line discharge 100' from the well bore, variance granted for blooie line discharge to be 45' from the well bore.
- Compressors located in the opposite direction from the blooie line a minimum of 100' from the
 well bore. Variance granted for two truck/trailer mounted air compressors located within 40 feet
 from the well bore and 60' from the blooie line.
- In lieu of mud products on location, Kerr McGee will fill the reserve pit with water for kill fluid.
- Automatic igniter. Variance granted for igniter due to there being no productive formations while drilling with air.
- FIT test. Variance granted due to well-known geology and problems that can occur with FIT test.

All provisions outlined in Onshore Oil & Gas Order #2 Drilling Operations shall be strictly adhered to. The following items are emphasized:

DRILLING/COMPLETION/PRODUCING OPERATING STANDARDS

- The spud date and time shall be reported orally to Vernal Field Office within 24 hours of spudding.
- Notify Vernal Field Office Supervisory Petroleum Engineering Technician at least 24 hours in advance of casing cementing operations and BOPE & casing pressure tests.
- All requirements listed in Onshore Order #2 III. E. Special Drilling Operations are applicable for air drilling of surface hole.
- Blowout prevention equipment (BOPE) shall remain in use until the well is completed or abandoned. Closing unit controls shall remain unobstructed and readily accessible at all times. Choke manifolds shall be located outside of the rig substructure.
- All BOPE components shall be inspected daily and those inspections shall be recorded in the daily drilling report. Components shall be operated and tested as required by Onshore Oil & Gas Order No. 2 to insure good mechanical working order. All BOPE pressure tests shall be

Page 5 of 7 Well: NBU 9221-20F 11/2/2011

performed by a test pump with a chart recorder and <u>NOT</u> by the rig pumps. Test shall be reported in the driller's log.

- BOP drills shall be initially conducted by each drilling crew within 24 hours of drilling out from under the surface casing and weekly thereafter as specified in Onshore Oil & Gas Order No. 2.
- Casing pressure tests are required before drilling out from under all casing strings set and cemented in place.
- No aggressive/fresh hard-banded drill pipe shall be used within casing.
- Cement baskets shall not be run on surface casing.
- The operator must report all shows of water or water-bearing sands to the BLM. If flowing water
 is encountered it must be sampled, analyzed, and a copy of the analyses submitted to the BLM
 Vernal Field Office.
- The operator must report encounters of all non oil & gas mineral resources (such as Gilsonite, tar sands, oil shale, trona, etc.) to the Vernal Field Office, in writing, within 5 working days of each encounter. Each report shall include the well name/number, well location, date and depth (from KB or GL) of encounter, vertical footage of the encounter and, the name of the person making the report (along with a telephone number) should the BLM need to obtain additional information.
- A complete set of angular deviation and directional surveys of a directional well will be submitted to the Vernal BLM office engineer within 30 days of the completion of the well.
- While actively drilling, chronologic drilling progress reports shall be filed directly with the BLM, Vernal Field Office on a weekly basis in sundry, letter format or e-mail to the Petroleum Engineers until the well is completed.
- A cement bond log (CBL) will be run from the production casing shoe to the top of cement and shall be utilized to determine the bond quality for the production casing. Submit a field copy of the CBL to this office.
- Please submit an electronic copy of all other logs run on this well in LAS format to BLM_UT_VN_Welllogs@BLM.gov. This submission will supersede the requirement for submittal of paper logs to the BLM.
- There shall be no deviation from the proposed drilling, completion, and/or workover program as approved. Safe drilling and operating practices must be observed. Any changes in operation must have prior approval from the BLM Vernal Field Office.

Page 6 of 7 Well: NBU 9221-20F 11/2/2011

OPERATING REQUIREMENT REMINDERS:

- All wells, whether drilling, producing, suspended, or abandoned, shall be identified in accordance with 43 CFR 3162.6. There shall be a sign or marker with the name of the operator, lease serial number, well number, and surveyed description of the well.
- For information regarding production reporting, contact the Office of Natural Resources Revenue (ONRR) at www.ONRR.gov.
- Should the well be successfully completed for production, the BLM Vernal Field office must be
 notified when it is placed in a producing status. Such notification will be by written
 communication and must be received in this office by not later than the fifth business day
 following the date on which the well is placed on production. The notification shall provide, as a
 minimum, the following informational items:
 - Operator name, address, and telephone number.
 - Well name and number.
 - Well location (¼¼, Sec., Twn, Rng, and P.M.).
 - Date well was placed in a producing status (date of first production for which royalty will be paid).
 - The nature of the well's production, (i.e., crude oil, or crude oil and casing head gas, or natural gas and entrained liquid hydrocarbons).
 - The Federal or Indian lease prefix and number on which the well is located; otherwise the non-Federal or non-Indian land category, i.e., State or private.
 - Unit agreement and/or participating area name and number, if applicable.
 - o Communitization agreement number, if applicable.
- Any venting or flaring of gas shall be done in accordance with Notice to Lessees (NTL) 4A and needs prior approval from the BLM Vernal Field Office.
- All undesirable events (fires, accidents, blowouts, spills, discharges) as specified in NTL 3A will
 be reported to the BLM, Vernal Field Office. Major events, as defined in NTL3A, shall be
 reported verbally within 24 hours, followed by a written report within 15 days. "Other than Major
 Events" will be reported in writing within 15 days. "Minor Events" will be reported on the
 Monthly Report of Operations and Production.
- Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (BLM Form 3160-4) shall be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3162.4-1. Two copies of all logs run, core descriptions, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, shall be filed on BLM Form 3160-4. Submit with the well completion report a geologic report including, at a minimum, formation tops, and a summary and conclusions. Also include deviation surveys, sample descriptions, strip logs, core data, drill stem test data, and results of production tests if

Page 7 of 7 Well: NBU 9221-20F 11/2/2011

performed. Samples (cuttings, fluid, and/or gas) shall be submitted only when requested by the BLM, Vernal Field Office.

- All off-lease storage, off-lease measurement, or commingling on-lease or off-lease, shall have prior written approval from the BLM Vernal Field Office.
- Oil and gas meters shall be calibrated in place prior to any deliveries. The BLM Vernal Field Office Petroleum Engineers will be provided with a date and time for the initial meter calibration and all future meter proving schedules. A copy of the meter calibration reports shall be submitted to the BLM Vernal Field Office. All measurement facilities will conform to the API standards for liquid hydrocarbons and the AGA standards for natural gas measurement. All measurement points shall be identified as the point of sale or allocation for royalty purposes.
- A schematic facilities diagram as required by Onshore Oil & Gas Order No. 3 shall be submitted
 to the BLM Vernal Field Office within 30 days of installation or first production, whichever occurs
 first. All site security regulations as specified in Onshore Oil & Gas Order No. 3 shall be
 adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively
 sealed in accordance with Onshore Oil & Gas Order No. 3.
- Any additional construction, reconstruction, or alterations of facilities, including roads, gathering lines, batteries, etc., which will result in the disturbance of new ground, shall require the filing of a suitable plan and need prior approval of the BLM Vernal Field Office. Emergency approval may be obtained orally, but such approval does not waive the written report requirement.
- No location shall be constructed or moved, no well shall be plugged, and no drilling or workover
 equipment shall be removed from a well to be placed in a suspended status without prior
 approval of the BLM Vernal Field Office. If operations are to be suspended for more than 30
 days, prior approval of the BLM Vernal Field Office shall be obtained and notification given
 before resumption of operations.
- Pursuant to Onshore Oil & Gas Order No. 7, this is authorization for pit disposal of water produced from this well for a period of 90 days from the date of initial production. A permanent disposal method must be approved by this office and in operation prior to the end of this 90-day period. In order to meet this deadline, an application for the proposed permanent disposal method shall be submitted along with any necessary water analyses, as soon as possible, but no later than 45 days after the date of first production. Any method of disposal which has not been approved prior to the end of the authorized 90-day period will be considered as an Incident of Noncompliance and will be grounds for issuing a shut-in order until an acceptable manner for disposing of said water is provided and approved by this office.
- Unless the plugging is to take place immediately upon receipt of oral approval, the Field Office Petroleum Engineers must be notified at least 24 hours in advance of the plugging of the well, in order that a representative may witness plugging operations. If a well is suspended or abandoned, all pits must be fenced immediately until they are backfilled. The "Subsequent Report of Abandonment" (Form BLM 3160-5) must be submitted within 30 days after the actual plugging of the well bore, showing location of plugs, amount of cement in each, and amount of casing left in hole, and the current status of the surface restoration.

Sundry Number: 21477 API Well Number: 43047508350000

	STATE OF UTAH		FORM 9
	DIVISION OF OIL, GAS, AND MIN		5.LEASE DESIGNATION AND SERIAL NUMBER: UTU 0575
	RY NOTICES AND REPORTS		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: UTE
Do not use this form for propo bottom-hole depth, reenter plu DRILL form for such proposals	7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES		
1. TYPE OF WELL Gas Well	8. WELL NAME and NUMBER: NBU 921-20F		
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONS	HORE, L.P.		9. API NUMBER: 43047508350000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th S	PHO Street, Suite 600, Denver, CO, 80217 3779	NE NUMBER: 720 929-6515 Ext	9. FIELD and POOL or WILDCAT: NATURAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2124 FNL 2189 FWL			COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSH: Qtr/Qtr: SENW Section: 20	IP, RANGE, MERIDIAN:) Township: 09.0S Range: 21.0E Meridian:	S	STATE: UTAH
11. CHE	CK APPROPRIATE BOXES TO INDICA	TE NATURE OF NOTICE, REPORT,	OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
Kerr-McGee Oil & G extension to this A	CHANGE TO PREVIOUS PLANS CHANGE WELL STATUS DEEPEN OPERATOR CHANGE PRODUCTION START OR RESUME REPERFORATE CURRENT FORMATION TUBING REPAIR WATER SHUTOFF WILDCAT WELL DETERMINATION DMPLETED OPERATIONS. Clearly show all per cas Onshore, L.P. (Kerr-McGee APD for the maximum time allowith any questions and/or cor	e) respectfully requests an owed. Please contact the mments. Thank you.	CASING REPAIR CHANGE WELL NAME CONVERT WELL TYPE NEW CONSTRUCTION PLUG BACK RECOMPLETE DIFFERENT FORMATION TEMPORARY ABANDON WATER DISPOSAL ✓ APD EXTENSION OTHER: Volumes, etc. Approved by the Utah Division of Oil, Gas and Mining 01/03/2012 y:
NAME (PLEASE PRINT) Danielle Piernot	PHONE NUMBER	TITLE Regulatory Analyst	
SIGNATURE N/A	720 929-6156	DATE 12/21/2011	
· -, · ·			

Sundry Number: 21477 API Well Number: 43047508350000



The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

Request for Permit Extension Validation Well Number 43047508350000

API: 43047508350000 **Well Name:** NBU 921-20F

Location: 2124 FNL 2189 FWL QTR SENW SEC 20 TWNP 090S RNG 210E MER S

Company Permit Issued to: KERR-MCGEE OIL & GAS ONSHORE, L.P.

Date Original Permit Issued: 12/28/2009

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision. Following is a checklist of some items related to the application, which should be verified.

 If located on private land, has the ownership changed, if so, has the surface agreement been updated? Yes No
 Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location? Yes No
 Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well? Yes No
 Have there been any changes to the access route including ownership, or rightof- way, which could affect the proposed location? Yes No
• Has the approved source of water for drilling changed? Yes No
 Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation? Yes No
• Is bonding still in place, which covers this proposed well? Yes No

Signature: Danielle Piernot **Date:** 12/21/2011

Title: Regulatory Analyst Representing: KERR-MCGEE OIL & GAS ONSHORE, L.P.

	STATE OF UTAH		FORM 9		
ſ	DEPARTMENT OF NATURAL RESOURG DIVISION OF OIL, GAS, AND MIR		5.LEASE DESIGNATION AND SERIAL NUMBER: UTU 0575		
SUNDR	Y NOTICES AND REPORTS	ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: UTE		
Do not use this form for pro current bottom-hole depth, I FOR PERMIT TO DRILL form	7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES				
1. TYPE OF WELL Gas Well	8. WELL NAME and NUMBER: NBU 921-20F				
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	ISHORE, L.P.		9. API NUMBER: 43047508350000		
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th	n Street, Suite 600, Denver, CO, 8021	PHONE NUMBER: 720 929-	9. FIELD and POOL or WILDCAT: 65NATERAL BUTTES		
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2124 FNL 2189 FWL			COUNTY: UINTAH		
QTR/QTR, SECTION, TOWNSH	HP, RANGE, MERIDIAN: 20 Township: 09.0S Range: 21.0E Meri	dian: S	STATE: UTAH		
11. CHECI	K APPROPRIATE BOXES TO INDICA	TE NATURE OF NOTICE, REPOI	RT, OR OTHER DATA		
TYPE OF SUBMISSION		TYPE OF ACTION			
	ACIDIZE	ALTER CASING	CASING REPAIR		
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME		
	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE		
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	NEW CONSTRUCTION		
	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK		
✓ SPUD REPORT	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION		
Date of Spud: 3/13/2012	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON		
0/10/2012	TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL		
DRILLING REPORT Report Date:	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION		
	WILDCAT WELL DETERMINATION	OTHER	OTHER:		
	WILDCAT WELL DETERMINATION	U OTHER	<u> </u>		
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. MIRU TRIPPLE A BUCKET RIG. DRILLED 20" CONDUCTOR HOLE TO 40'. RAN 14" 36.7# SCHEDULE 10 PIPE. CMT W/28 SX READY MIX. SPUD WELL ON 03/13/2012 AT 0800 HRS. WELL ON 03/13/2012 AT 0800 HRS. Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY March 16, 2012					
NAME (PLEASE PRINT) Sheila Wopsock	PHONE NUME 435 781-7024	BER TITLE Regulatory Analyst			
SIGNATURE N/A		DATE 3/15/2012			

Sundry Number: 23935 API Well Number: 43047508350000 FEDERAL APPROVAL OF THIS ACTION IS NECESSARY

	STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES		FORM 9		
ı	DIVISION OF OIL, GAS, AND MINING	G	5.LEASE DESIGNATION AND SERIAL NUMBER: UTU 0575		
SUNDR	RY NOTICES AND REPORTS ON	WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: UTE		
current bottom-hole depth,	Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.				
1. TYPE OF WELL Gas Well	8. WELL NAME and NUMBER: NBU 921-20F				
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	NSHORE, L.P.		9. API NUMBER: 43047508350000		
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18tl	PHO h Street, Suite 600, Denver, CO, 80217 37	ONE NUMBER: 720 929-6	9. FIELD and POOL or WILDCAT: 5NATURAL BUTTES		
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2124 FNL 2189 FWL			COUNTY: UINTAH		
QTR/QTR, SECTION, TOWNSH	HIP, RANGE, MERIDIAN: 20 Township: 09.0S Range: 21.0E Meridian:	S	STATE: UTAH		
11. CHEC	K APPROPRIATE BOXES TO INDICATE N	IATURE OF NOTICE, REPOF	T, OR OTHER DATA		
TYPE OF SUBMISSION		TYPE OF ACTION			
NOTICE OF INTENT Approximate date work will start: 3/15/2012 SUBSEQUENT REPORT Date of Work Completion: SPUD REPORT Date of Spud:	CHANGE TO PREVIOUS PLANS CHANGE WELL STATUS DEEPEN OPERATOR CHANGE PRODUCTION START OR RESUME REPERFORATE CURRENT FORMATION TUBING REPAIR	ALTER CASING CHANGE TUBING COMMINGLE PRODUCING FORMATIONS FRACTURE TREAT PLUG AND ABANDON RECLAMATION OF WELL SITE SIDETRACK TO REPAIR WELL VENT OR FLARE SI TA STATUS EXTENSION	CASING REPAIR CHANGE WELL NAME CONVERT WELL TYPE NEW CONSTRUCTION PLUG BACK RECOMPLETE DIFFERENT FORMATION TEMPORARY ABANDON WATER DISPOSAL APD EXTENSION		
Report Date:		OTHER	OTHER:		
The operator requiformation (part of the approval for close production casing conduction drilling plan will necessity	completed operations. Clearly show all perests approval to deepen the weathe Mesaverde Group). The Operation of the loop drilling option, surface of the hange. All other aspects of the ot change. Please see the attack	ell to the Blackhawk erator also requests casing change and previously approved chment. Thank you.	Approved by the Utah Division of Oil, Gas and Mining Date: March 26, 2012 By:		
NAME (PLEASE PRINT) Jaime Scharnowske	PHONE NUMBER 720 929-6304	TITLE Regulartory Analyst			
SIGNATURE N/A		DATE 3/15/2012			

NBU 921-20F Drilling Program

1 of 7

Kerr-McGee Oil & Gas Onshore. L.P.

NBU 921-20F

Surface: 2124 FNL / 2189 FEL SENW

Section 20 T9S R21E

Unitah County, Utah Mineral Lease: UTU-0575

ONSHORE ORDER NO. 1

DRILLING PROGRAM

Estimated Tops of Important Geologic Markers: Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations:

<u>Formation</u>	<u>Depth</u>	<u>Resource</u>
18-4-	0 0	
Uinta	0 - Surface	
Green River	1,608'	
Birds Nest	1,871'	Water
Mahogany	2,377'	Water
Wasatch	4,960'	Gas
Mesaverde	7,948'	Gas
Sego	10,233'	Gas
Castlegate	10,307'	Gas
Blackhawk	10,681'	Gas
TVD	11,281'	
TD	11,281'	

3. <u>Pressure Control Equipment</u> (Schematic Attached)

Please refer to the attached Drilling Program

4. <u>Proposed Casing & Cementing Program:</u>

Please refer to the attached Drilling Program

NBU 921-20F Drilling Program
2 of 7

5. <u>Drilling Fluids Program</u>:

Please refer to the attached Drilling Program

6. <u>Evaluation Program</u>:

Please refer to the attached Drilling Program

7. <u>Abnormal Conditions</u>:

Maximum anticipated bottom hole pressure calculated at 11281' TVD, approximately equals 7,445 psi (0.66 psi/ft = actual bottomhole gradient)

Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

Maximum anticipated surface pressure equals approximately 5,015 psi (bottom hole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

Per Onshore Order No. 2 - Max Anticipated Surf. Press.(MASP) = (Pore Pressure at next csg point-(0.22 psi/ft-partial evac gradient x TVD of next csg point))

8. <u>Anticipated Starting Dates:</u>

Drilling is planned to commence immediately upon approval of this application.

9. <u>Variances:</u>

Please refer to the attached Drilling Program. Onshore Order #2 – Air Drilling Variance

Kerr-McGee Oil & Gas Onshore LP (KMG) respectfully requests a variance to several requirements associated with air drilling outlined in Onshore Order 2

- · Blowout Prevention Equipment (BOPE) requirements;
- · Mud program requirements; and
- Special drilling operation (surface equipment placement) requirements associated with air drilling.

This Standard Operating Practices addendum provides supporting information as to why KMG current air drilling practices for constructing the surface casing hole should be granted a variance to Onshore Order 2 air drilling requirements.

The reader should note that the air rig is used only to construct a stable surface casing hole through a historically difficult lost circulation zone. A conventional rotary rig follows the air rig, and is used to drill and construct the majority of the wellbore.

NBU 921-20F Drilling Program
3 of 7

More notable, KMG has used the air rig layout and procedures outlined below to drill the surface casing hole in approximately 675 wells without incident of blow out or loss of life.

Background

In a typical well, KMG utilizes an air rig for drilling the surface casing hole, an interval from the surface to surface casing depths, which varies in depth from 1,700 to 2,800 feet. The air rig drilling operation does not drill through productive or over pressured formations in KMG field, but does penetrate the Uinta and Green River Formations. The purpose of the air drilling operation is to overcome the severe loss circulation zone in the Green River known as the Bird's Nest while creating a stable hole for the surface casing. The surface casing hole is generally drilled to approximately 500 feet below the Bird's Nest.

Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may be set deeper in areas that the surface formation is not found competent. This rig also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.

The air rig is then mobilized to drill the surface casing hole by drilling a 12 1/4 inch hole for the first 200 feet, then will drill a 11inch hole to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 11 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 8-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.

KMG fully appreciates Onshore Order 2 well control and safety requirements associated with a typical air drilling operations. However, the requirements of Onshore Order 2 are excessive with respect to the air rig layout and drilling operation procedures that are currently in practice to drill and control the surface casing hole in KMG Fields.

Variance for BOPE Requirements

The air rig operation utilizes a properly lubricated and maintained air bowl diverter system which diverts the drilling returns to a six-inch blooie line. The air bowl is the only piece of BOPE equipment which is installed during drilling operations and is sufficient to contain the air returns associated with this drilling operation. As was discussed earlier, the drilling of the surface hole does not encounter any over pressured or productive zones, and as a result standard BOPE equipment should not be required. In addition, standard drilling practices do not support the use of BOPE on 40 feet of conductor pipe.

Variance for Mud Material Requirements

Onshore Order 2 also states that sufficient quantities of mud materials shall be maintained or readily accessible for the purpose of assuring adequate well control. Once again, the surface hole drilling operations does not encounter over pressured or productive intervals, and as a result there is not a need to control pressure in the surface hole with a mud system. Instead of mud, the air rigs utilize water from the reserve pit for well control, if necessary. A skid pump which is located near the reserve pit (see attachment) will supply the water to the well bore.

NBU 921-20F Drilling Program
4 of 7

Variance for Special Drilling Operation (surface equipment placement) Requirements

Onshore Order 2 requires specific safety distances or setbacks for the placement of associated standard air drilling equipment, wellbore, and reserve pits. The air rigs used to drill the surface holes are not typical of an air rig used to drill a producing hole in other parts of the US. These are smaller in nature and designed to fit a KMG location. The typical air rig layout for drilling surface hole in the field is attached.

Typically the blooie line discharge point is required to be 100 feet from the well bore. In the case of a KMG well, the reserve pit is only 45 feet from the rig and is used for the drill cuttings. The blooie line, which transports the drill cuttings from the well to the reserve pit, subsequently discharges only 45 feet from the well bore.

Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors (see attachment) are located on the rig (1250 cfm) and on a standby trailer (1170 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.

Lastly, Onshore Order 2 addresses the need for an automatic igniter or continuous pilot light on the blooie line. The air rig does not utilize an igniter as the surface hole drilling operation does not encounter productive formations.

Variance for FIT Requirements

KMG also respectfully requests a variance to Onshore Order 2, Section III, Part Bi, for the pressure integrity test (PIT, also known as a formation integrity test (FIT)). This well is not an exploratory well and is being drilled in an area where the formation integrity is well known. Additionally, when an FIT is run with the mud weight as required, the casing shoe frequently breaks down and causes subsequent lost circulation when drilling the entire depth of the well.

Conclusion

The air rig operating procedures and the attached air rig layout have effectively maintained well control while drilling the surface holes in KMG Fields. KMG respectfully requests a variance from Onshore Order 2 with respect to air drilling well control requirements as discussed above.

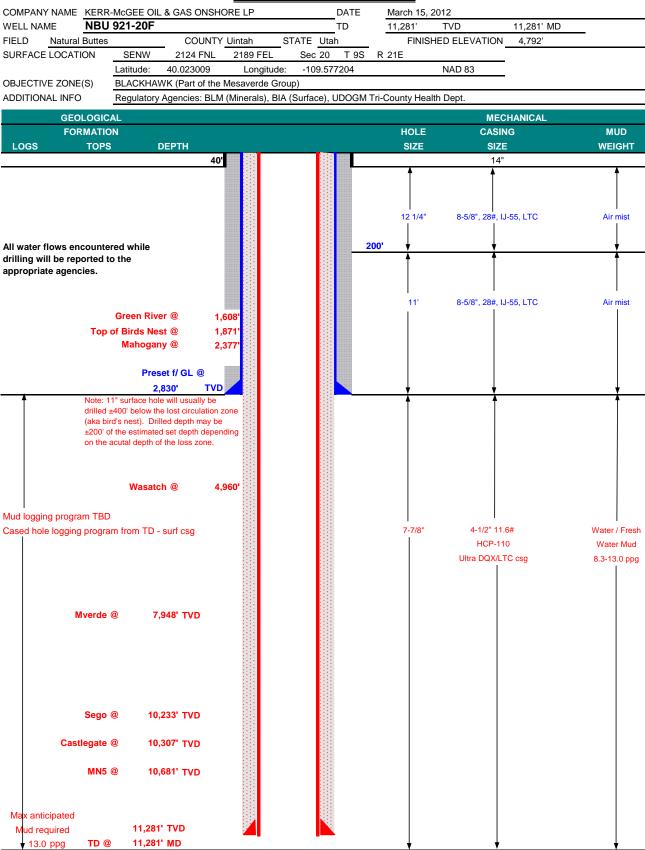
10. Other Information:

Please refer to the attached Drilling Program.

NBU 921-20F Drilling Program
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KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM



Drilling Program NBU 921-20F



KERR-McGEE OIL & GAS ONSHORE LP

DRILLING PROGRAM

CASING PROGRAM							DESIGN FACTORS				
										LTC	DQX
	SIZE	INT	ERVA	L	WT.	GR.	CPLG.	BURST	COLLAPSE	TE	NSION
CONDUCTOR	14"	()-40'								
								3,390	1,880	348,000	N/A
SURFACE	8-5/8"	0	to	2,830	28.00	IJ-55	LTC	1.90	1.42	5.02	N/A
								10,690	8,650	279,000	367,000
PRODUCTION	4-1/2"	0	to	5,000	11.60	HCP-110	DQX	1.19	1.13		3.50
	4-1/2"	5,000	to	11,281'	11.60	HCP-110	LTC	1.19	1.13	4.78	

Surface Casing:

(Burst Assumptions: TD = 0.73 psi/ft = frac gradient @ surface shoe ppg)

Fracture at surface shoe with 0.1 psi/ft gas gradient above

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

Production casing:

(Burst Assumptions: Pressure test with 8.4ppg @ 9000 0.66 psi/ft = bottomhole gradient psi)

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

CEMENT PROGRAM

	FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE LEAD	500'	Premium cmt + 2% CaCl	180	60%	15.80	1.15
Option 1		+ 0.25 pps flocele				
TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	270	0%	15.80	1.15
		+ 2% CaCl + 0.25 pps flocele				
SURFACE		NOTE: If well will circulate water t	o surface, o	otion 2 will b	e utilized	
Option 2 LEAD	2,330'	65/35 Poz + 6% Gel + 10 pps gilsonite	210	35%	11.00	3.82
		+ 0.25 pps Flocele + 3% salt BWOW				
TAIL	500'	Premium cmt + 2% CaCl	150	35%	15.80	1.15
		+ 0.25 pps flocele				
TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80	1.15
PRODUCTION LEAD	4,451'	Premium Lite II +0.25 pps	350	35%	12.00	3.38
		celloflake + 5 pps gilsonite + 10% gel				
		+ 0.5% extender				
TAIL	6,830'	50/50 Poz/G + 10% salt + 2% gel	1,610	35%	14.30	1.31
		+ 0.1% R-3			•	

^{*}Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

FLOAT EQUIPMENT & CENTRALIZERS

SURFACE

Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe

PRODUCTION

Float shoe, 1 jt, float collar. 15 centralizers for a Mesaverde and 20 for a Blackhawk well.

1 centralizer on the first 3 joints and one every third joint thereafter.

ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

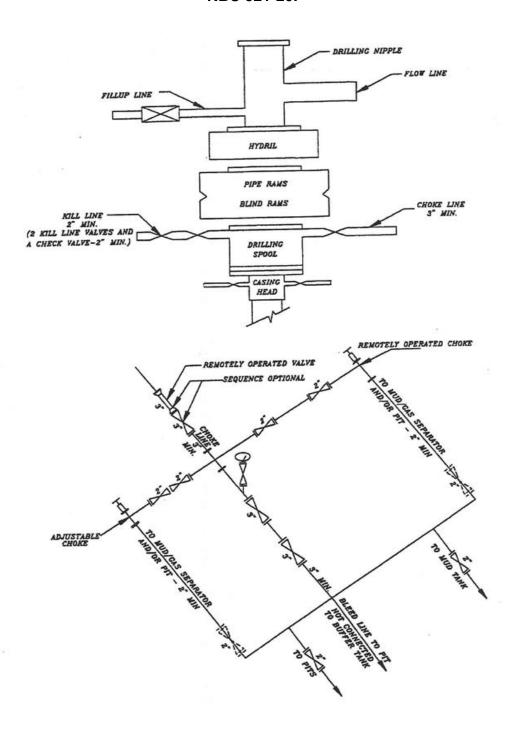
Surve	ys will	be	taken	at	1	,000'	minimum	intervals.

Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized.

DRILLING ENGINEER:		DATE:	
	Nick Spence / Danny Showers / Chad Loesel		
DRILLING SUPERINTENDENT:		DATE:	
	Kenny Gathings / Lovel Young		

^{*}Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

EXHIBIT A NBU 921-20F



SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK

Requested Drilling Options:

Kerr-McGee will use either a closed loop drilling system that will require one pit and one cuttings storage area to be constructed on the drilling pad or a traditional drilling operation with one pit used for drilling and completion operations. The cuttings storage area will be used to contain only the de-watered drill cuttings and will be lined and bermed to prevent any liquid runoff. The drill cuttings will be buried in the completion pit once completion operations are completed according to traditional pit closure standards. The pit will be constructed to allow for completion operations. The completion operations pit will be lined with a synthetic material 20 mil or thicker and will be used for the completing of the wells on the pad or used as part of our Aandarko Completions Transportation System (ACTS). Using the closed loop drilling system will allow Kerr-McGee to decrease the amount of disturbance/footprint on location compared to a single large drilling/completions pit.

If Kerr-McGee does not use a closed loop drilling system, it will construct a traditional drilling/completions pit to contain drill cuttings and for use in completion operations. The pit will be lined with a synthetic material 20 mil or thicker. The drill cuttings will be buried in the pit using traditional pit closure standards.

Sundry Number: 24088 API Well Number: 43047508350000

	STATE OF UTAH		FORM 9			
ı	DEPARTMENT OF NATURAL RESOUR DIVISION OF OIL, GAS, AND MI		5.LEASE DESIGNATION AND SERIAL NUMBER: UTU 0575			
SUNDR	RY NOTICES AND REPORTS	ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: UTE			
Do not use this form for pro current bottom-hole depth, I FOR PERMIT TO DRILL form	7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES					
1. TYPE OF WELL Gas Well	8. WELL NAME and NUMBER: NBU 921-20F					
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	ISHORE, L.P.		9. API NUMBER: 43047508350000			
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th	h Street, Suite 600, Denver, CO, 8021	PHONE NUMBER: 17 3779 720 929-0	9. FIELD and POOL or WILDCAT: 5NATERAL BUTTES			
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2124 FNL 2189 FWL			COUNTY: UINTAH			
QTR/QTR, SECTION, TOWNSH	HIP, RANGE, MERIDIAN: 20 Township: 09.0S Range: 21.0E Meri	idian: S	STATE: UTAH			
11. CHECI	K APPROPRIATE BOXES TO INDICA	ATE NATURE OF NOTICE, REPOR	RT, OR OTHER DATA			
TYPE OF SUBMISSION		TYPE OF ACTION				
	ACIDIZE	ALTER CASING	CASING REPAIR			
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME			
	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE			
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	NEW CONSTRUCTION			
	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK			
SPUD REPORT	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION			
Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON			
	TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL			
✓ DRILLING REPORT Report Date:	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION			
3/21/2012	WILDCAT WELL DETERMINATION	OTHER	OTHER:			
40 DECODINE DRODOGED OF		- United	<u>'</u>			
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. MIRU AIR RIG ON MARCH 18, 2012. DRILLED SURFACE HOLE TO 2,856'. RAN SURFACE CASING AND CEMENTED. WELL IS WAITING ON ROTARY RIG. DETAILS OF CEMENT JOB WILL BE INCLUDED WITH WELL COMPLETION REPORT. COMPLETION REPORT. Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY March 26, 2012						
NAME (PLEASE PRINT) Jaime Scharnowske	PHONE NUM 720 929-6304	BER TITLE Regulartory Analyst				
SIGNATURE N/A		DATE 3/22/2012				

Print Form

BLM - Vernal Field Office - Notification Form

Ope	rator KERR-McGEE OIL & GA	<u>S</u> Rig Name	e/# <u>BUCI</u>	KET RIG
Subr	nitted By <u>J. Scharnowske</u>	Phone Nur	nber <u>720.</u>	929.6304
	Name/Number NBU 921-20F			
Qtr/0	Qtr <u>SENW</u> Section 20	Township g	<u>s</u> R	ange <u>21E</u>
-	e Serial Number <u>UTU-0575</u>			
API	Number <u>4304750835</u>			
	<u>d Notice</u> – Spud is the initial pelow a casing string.	spudding o	f the we	ll, not drilling
	Date/Time <u>03/13/2012</u>	08:00 HRS	AM 🗌	РМ
Casin time	ng – Please report time casing Surface Casing Intermediate Casing Production Casing Liner Other	ng run starl	ts, not ce	ementing
	Date/Time <u>03/16/2012</u>	08:00 HRS	AM 🗌	PM
BOP	E Initial BOPE test at surface BOPE test at intermediate of 30 day BOPE test Other			RECEIVED MAR 1 3 2012 ON OF OIL GAS & MINES
	Date/Time		AM 🗌	РМ
Rem	arks estimated date and time. PLEAS	SE CONTACT KENN	Y GATHINGS	AT
435.82	8.0986 OR LOVEL YOUNG AT 435.781.705	1		

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING

ENTITY ACTION FORM					
Operator:	KERR McGEE OIL & GAS ONSHORI	ELP Opera	ator Account Number:	N 2995	
Address:	1368 SOUTH 1200 EAST				
•	city VERNAL				
	state UT zip 8	4078	Phone Number:	(435) 781-7024	

API Number	Well	Name	QQ	Sec	Twp	Rng County			
4304750835	NBU 921-20F		SENW 2		98	21E	UINTAH		
Action Code	Current Entity Number	New Entity Number	s	Spud Date			Entity Assignment Effective Date		
В	99999	2900	3	3/13/201	2	3 120 12012			
	U TRIPPLE A BUCKET D WELL ON 03/13/2012	RIG. WSMV	D			at a c			

MAIN

API Number	Well Name		QQ	QQ Sec Twp			Rng County		
Action Code	Current Entity Number	New Entity Number	s	Spud Date			Entity Assignment Effective Date		
Comments:									

Well 3

API Number	lumber Well Name		QQ Sec Twp			Rng County		
Action Code	Current Entity Number	New Entity Number	S	pud Da	te	Entity Assignment Effective Date		
omments:				***************************************				

ACTION CODES:

- A Establish new entity for new well (single well only)
- B Add new well to existing entity (group or unit well)
- C Re-assign well from one existing entity to another existing entity
- D Re-assign well from one existing entity to a new entity

 E Other (Explain in 'comments' section)

MAR 1 5 2012

Name (Please Print)

Title

Signature **REGULATORY ANALYST**

3/15/2012

Date

(5/2000)

	STATE OF UTAH		FORM 9							
ι	DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	3	5.LEASE DESIGNATION AND SERIAL NUMBER: UTU 0575							
SUNDR	Y NOTICES AND REPORTS ON	WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: UTE							
	posals to drill new wells, significantly deel reenter plugged wells, or to drill horizontal n for such proposals.		7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES							
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 921-20F							
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	ISHORE, L.P.		9. API NUMBER: 43047508350000							
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th	PHO n Street, Suite 600, Denver, CO, 80217 37	ONE NUMBER: 720 929-6	9. FIELD and POOL or WILDCAT: 5NATUERAL BUTTES							
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2124 FNL 2189 FWL			COUNTY: UINTAH							
QTR/QTR, SECTION, TOWNSH	IIP, RANGE, MERIDIAN: 20 Township: 09.0S Range: 21.0E Meridian:	S	STATE: UTAH							
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA										
TYPE OF SUBMISSION	TYPE OF ACTION									
	ACIDIZE	ALTER CASING	CASING REPAIR							
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME							
	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE							
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	NEW CONSTRUCTION							
	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK							
SPUD REPORT	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION							
Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON							
	TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL							
DRILLING REPORT Report Date:	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION							
7/6/2012		OTHER	OTHER:							
44 DECORUPE PROPOSED OR			<u>'</u>							
	COMPLETED OPERATIONS. Clearly show all permonth of June 2012. Surface c	•	Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY July 09, 2012							
NAME (PLEASE PRINT) Jaime Scharnowske	PHONE NUMBER 720 929-6304	TITLE Regulartory Analyst								
SIGNATURE N/A		DATE 7/6/2012								

	FORM 9									
ı	DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	3	5.LEASE DESIGNATION AND SERIAL NUMBER: UTU 0575							
SUNDR	Y NOTICES AND REPORTS ON	WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: UTE							
	posals to drill new wells, significantly deep reenter plugged wells, or to drill horizontal n for such proposals.		7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES							
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QTR/QTR, SECTION, TOWNSH Qtr/Qtr: SENW Section: 2	STATE: UTAH									
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA										
TYPE OF SUBMISSION	TYPE OF ACTION									
_	ACIDIZE	ALTER CASING	CASING REPAIR							
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME							
 	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE							
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	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK							
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Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON							
	TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL							
DRILLING REPORT Report Date:	☐ WATER SHUTOFF ☐ 9	SI TA STATUS EXTENSION	APD EXTENSION							
8/2/2012		OTHER	OTHER:							
12 DESCRIBE BRODOSED OR	COMPLETED OPERATIONS. Clearly show all pe									
	month of July 2012. Surface ca	_	Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY August 07, 2012							
		I =								
NAME (PLEASE PRINT) Cara Mahler	PHONE NUMBER 720 929-6029	TITLE Regulatory Analyst I								
SIGNATURE N/A		DATE 8/2/2012								

State of Utah - Notification Form

Operator Anadarko Petroleum Rig Name/# PIONEER 54 Submitted By STUART NEILSON Phone Number 435-790-2921 Well Name/Number NBU 921-20F Qtr/Qtr SE/NW Section 20 Township 9S Range 21 Lease Serial Number UTU0575 API Number 4304750835
<u>Casing</u> – Time casing run starts, not cementing times.
Production Casing Other
Date/Time AM _ PM _
BOPE Initial BOPE test at surface casing point Other
Date/Time <u>8/14/12</u> <u>10:00</u> AM ☐ PM ⊠
Rig Move Location To:
Date/Time AM PM
Remarks AUG 1 4 2012

DIV. OF OIL, GAS & MINING

	STATE OF UTAH		FORM 9				
ı	DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	G	5.LEASE DESIGNATION AND SERIAL NUMBER: UTU 0575				
SUNDR	Y NOTICES AND REPORTS ON	I WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: UTE				
	posals to drill new wells, significantly dee reenter plugged wells, or to drill horizontal n for such proposals.		7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES				
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 921-20F				
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	ISHORE, L.P.		9. API NUMBER: 43047508350000				
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th	PH n Street, Suite 600, Denver, CO, 80217 37	ONE NUMBER: 79 720 929-6	9. FIELD and POOL or WILDCAT: 5M&TURAL BUTTES				
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2124 FNL 2189 FWL			COUNTY: UINTAH				
QTR/QTR, SECTION, TOWNSH	HP, RANGE, MERIDIAN: 20 Township: 09.0S Range: 21.0E Meridian	: S	STATE: UTAH				
11. CHECI	K APPROPRIATE BOXES TO INDICATE N	NATURE OF NOTICE, REPOR	T, OR OTHER DATA				
TYPE OF SUBMISSION		TYPE OF ACTION					
_	ACIDIZE	ALTER CASING	CASING REPAIR				
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME				
	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE				
SUBSEQUENT REPORT Date of Work Completion: 8/24/2012	DEEPEN	FRACTURE TREAT	☐ NEW CONSTRUCTION				
	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK				
SPUD REPORT	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION				
Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON				
	TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL				
DRILLING REPORT Report Date:	☐ WATER SHUTOFF ☐	SI TA STATUS EXTENSION	APD EXTENSION				
	☐ WILDCAT WELL DETERMINATION ✓	OTHER	OTHER: ACTS PIT				
			<u>'</u>				
FINISHED DRILLIN PRODUCTION CAS PIONEER 54 RIG INCLUDED WITH THI	COMPLETED OPERATIONS. Clearly show all p IG TO 11929' ON 8/21/2012. R SING. CEMENTED PRODUCTION ON 8/24/2012. DETAILS OF CEM E WELL COMPLETION REPORT. FINAL COMPLETION ACTIVITIES PHONE NUMBER	AN 4-1/2" 11.6# I-80 CASING. RELEASED IENT JOB WILL BE WELL IS WAITING ON	Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY August 24, 2012				
NAME (PLEASE PRINT) Cara Mahler	PHONE NUMBER 720 929-6029	Regulatory Analyst I					
SIGNATURE N/A		DATE 8/24/2012					

State of Utah - Notification Form

Submitted By STUART NEILSON Phone Number 435 Well Name/Number NBU 921-20F Qtr/Qtr SE/NW Section 20 Township 9S Range 21E Lease Serial Number UTU0575 API Number 4304750835	
<u>Casing</u> – Time casing run starts, not cementing time	S.
Production Casing Other	
Date/Time <u>8/23/12</u> <u>6</u> AM ⊠ PM □	
BOPE Initial BOPE test at surface casing point Other	
Date/Time AM _ PM _	RECEIVED AUG 2 2 2012
Rig Move Location To: <u>NBU 921-8D</u>	DIV. OF OIL, GAS & MINING
Date/Time <u>8/24/12</u> <u>7</u> AM ⊠ PM □	
Remarks	

	STATE OF UTAH				FORM 9		
	DEPARTMENT OF NATURAL RESOUF DIVISION OF OIL, GAS, AND M		3	5.LEASE DESIGNATION A UTU 0575	ND SERIAL NUMBER:		
SUNDR	Y NOTICES AND REPORTS	ON	WELLS	6. IF INDIAN, ALLOTTEE (OR TRIBE NAME:		
Do not use this form for pro current bottom-hole depth, FOR PERMIT TO DRILL form	posals to drill new wells, significantl reenter plugged wells, or to drill horiz n for such proposals.	y deep contal l	en existing wells below laterals. Use APPLICATION	7.UNIT or CA AGREEMEN NATURAL BUTTES	T NAME:		
1. TYPE OF WELL Gas Well				8. WELL NAME and NUMB NBU 921-20F	ER:		
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	ISHORE, L.P.			9. API NUMBER: 43047508350000			
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QTR/QTR, SECTION, TOWNSH	HIP, RANGE, MERIDIAN: 20 Township: 09.0S Range: 21.0E Mei	ridian:	S	STATE: UTAH			
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TYPE OF SUBMISSION			TYPE OF ACTION				
	ACIDIZE		ALTER CASING	CASING REPAIR			
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS		CHANGE TUBING	CHANGE WELL NAME			
	CHANGE WELL STATUS		COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE			
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	□ F	FRACTURE TREAT	☐ NEW CONSTRUCTION			
	OPERATOR CHANGE	F	PLUG AND ABANDON	PLUG BACK			
SPUD REPORT	PRODUCTION START OR RESUME	□ F	RECLAMATION OF WELL SITE	RECOMPLETE DIFFER	ENT FORMATION		
Date of Spud:	REPERFORATE CURRENT FORMATION		SIDETRACK TO REPAIR WELL	TEMPORARY ABANDO	DN		
	TUBING REPAIR		/ENT OR FLARE	WATER DISPOSAL			
DRILLING REPORT Report Date:	WATER SHUTOFF		SI TA STATUS EXTENSION	APD EXTENSION			
10/2/2012	WILDCAT WELL DETERMINATION		OTHER	OTHER:	ĺ		
12 DESCRIPE BROROSED OR	COMPLETED OPERATIONS. Clearly show			t-			
	completing the well. Well T	•	•	Accepted by Utah Division Oil, Gas and M FOR RECOF October 02	n of lining RD ONLY		
NAME (PLEASE PRINT)	PHONE NUM	BER	TITLE				
Lindsey Frazier	720 929-6857		Regulatory Analyst II				
SIGNATURE N/A			DATE 10/2/2012				

	STATE OF UTAH				FORM 9
ι	DEPARTMENT OF NATURAL RESOU DIVISION OF OIL, GAS, AND N		3	5.LEASE DESIGNATION UTU 0575	ON AND SERIAL NUMBER:
SUNDR	Y NOTICES AND REPORTS	S ON	WELLS	6. IF INDIAN, ALLOTT UTE	EE OR TRIBE NAME:
	posals to drill new wells, significant reenter plugged wells, or to drill hori n for such proposals.			7.UNIT or CA AGREE NATURAL BUTTES	MENT NAME:
1. TYPE OF WELL Gas Well				8. WELL NAME and N NBU 921-20F	UMBER:
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	ISHORE, L.P.			9. API NUMBER: 43047508350000	1
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th	h Street, Suite 600, Denver, CO, 802		ONE NUMBER: 720 929-6	9. FIELD and POOL o	r WILDCAT:
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2124 FNL 2189 FWL				COUNTY: UINTAH	
QTR/QTR, SECTION, TOWNSH	HIP, RANGE, MERIDIAN: 20 Township: 09.0S Range: 21.0E Me	eridian:	S	STATE: UTAH	
11. CHECI	K APPROPRIATE BOXES TO INDIC	ATE N	ATURE OF NOTICE, REPOR	T, OR OTHER DAT	·A
TYPE OF SUBMISSION			TYPE OF ACTION		
	ACIDIZE		ALTER CASING	CASING REPAIR	
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS		CHANGE TUBING	CHANGE WELL	NAME
	CHANGE WELL STATUS		COMMINGLE PRODUCING FORMATIONS	CONVERT WELL	ТҮРЕ
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN		FRACTURE TREAT	☐ NEW CONSTRU	CTION
	OPERATOR CHANGE		PLUG AND ABANDON	PLUG BACK	
SPUD REPORT	✓ PRODUCTION START OR RESUME		RECLAMATION OF WELL SITE	RECOMPLETE D	IFFERENT FORMATION
Date of Spud:	REPERFORATE CURRENT FORMATION		SIDETRACK TO REPAIR WELL	TEMPORARY A	BANDON
	TUBING REPAIR		/ENT OR FLARE	WATER DISPOSA	AL
DRILLING REPORT Report Date:	WATER SHUTOFF		SI TA STATUS EXTENSION	APD EXTENSION	4
10/16/2012	WILDCAT WELL DETERMINATION		OTHER	OTHER:	i
			JINEK		
The subject wel	COMPLETED OPERATIONS. Clearly sho I was placed on productio I History will be submitted report.	n on	10/16/2012. The	Accepted Utah Divi Oil, Gas an	sion of d Mining ORD ONLY
NAME (PLEASE PRINT) Lindsey Frazier	PHONE NUM 720 929-6857	MBER	TITLE Regulatory Analyst II		
SIGNATURE N/A			DATE 10/18/2012		

Form 3160-4 (August 2007)

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

FORM APPROVED OMB No. 1004-0137 Expires: July 31, 2010

	WELL (COMPL	ETION C	R RE	CON	/PLE	TION RI	EPOR	tT	AND L	OG			ease Serial N JTU0575	0.	
la. Type of	f Well	Oil Well	🔀 Gas '	Well	D D	ry [Other		_				6. I	f Indian, Allo	ttee or	Tribe Name
b. Type o	f Completion	Othe	lew Well er	☐ Wor	rk Ove	er 🗖	Deepen	□ P	lug	Back	☐ Diff	Resvr.	7. L	Jnit or CA Ag JTU63047A	greeme	nt Name and No.
2. Name of	Operator MCGEE OIL	& GAS	ONSHORE	-Mail: li			LINDSE @anadar			IER				ease Name at NBU 921-20		ll No.
3. Address		73779					3a.		No	o. (include 9-6857	area co	de)	9. A	PI Well No.		43-047-50835
4. Location	of Well (Re			ıd in acc	ordan	ce with I							10.	Field and Poo	ol, or E	Exploratory
At surfa			IL 2189FWL										11.	Sec. T. R. N	vf. or	Block and Survey OS R21E Mer SLB
At top p	orod interval i	eported b	elow 25EN 2161 FNL 2 189 F	IW 212	4FNL	2189F\	VL 40.02	3009 N	La	it, 109.57 BHI	7204 V 64	Lon HSN	12.	County or Pa		13. State
At total 14. Date St		1W 2124		wL 40.			, 109.577			<u></u>			<u> </u>	Elevations (D	F. KE	
03/13/2012 08/21/2012 D&A PReady to Prod. 10/16/2012											479	2 GL				
18. Total D	·	MD TVD	11292 11289	•		Plug Bac		MD TVI		112	231 22 8, B	20. D	epth Br	idge Plug Set	7	MD CVD
21. Type E BHP-H	lectric & Oth DIL/ZDL/CN	er Mecha IGR-CBL	nical Logs R /GR/CCL/T	un (Subi EMP-G	mit co R/CB	py of eac L	ch)				W	as well con as DST run rectional S	n?	X No □ X No □ No 2	Yes Yes Yes	(Submit analysis) (Submit analysis) (Submit analysis)
23. Casing at	nd Liner Reco	ord (Repo	ort all strings	set in w	ell)									,		
Hole Size	Size/G	rade	Wt. (#/ft.)	To _l (MI		Botton (MD)	, ,	Cemen Depth	ter	*			ry Vol. BL)	Cement T	op*	Amount Pulled
20.000		000 STL	36.7	<u> </u>	0		40		28				_			
11.000		25 IJ-55	28.0		0		340	1060 2290						0 20		
7.875	4.50	0 P-110	11.6		0	112	278					90			-20	
					\neg		_									
24. Tubing	Record											,				
Size	Depth Set (M	(D) P	acker Depth	(MD)	Sìz	e D	epth Set (MD)	P	acker Dep	th (MD) Size		epth Set (MD)	Packer Depth (MD)
2.375		0742		.,			26. Perfor	otion B		and .	-	_				· · · · · · · · · · · · · · · · · · ·
	ng Intervals	———										Gima		No Holos		Perf. Status
	ormation MESAVE	BDE	Тор	8028		tom 11061		Periorat	orated Interval Size 8028 TO 11061 0.3				.360			
A) B)	MESAVE	RUE		0020		11001				0020 10	11001	ľ	.000	201	<u> </u>	<u> </u>
C)							_								Dr.	0-
D)															VE	CEIVED
27. Acid, Fi	racture, Treat	ment, Cei	ment Squeeze	e, Etc.										N	^	2.0
	Depth Interva	al					0.4110.04			mount and				***	U # ,	<u> 2012 </u>
	802	8 TO 11	061 PUMP 1	3,309 B	BLS S	LICK HZ	O AND 31	5,460 L	33	30/30 011	AVVA S	AND		DIV. OF	OH	GAS&MINING
							_			·····					UIL,	SAS & MINING
							_							· · · · · · · · · · · · · · · · · · ·		
28. Product	ion - Interval	A														
Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL		Gas MCF	Water BBL		l Gr	avity API	Ga Gr	s avity	Produc	etion Method		
10/16/2012	10/20/2012	24		0.0		3234.0	624.							FLOW	S FRC	M WELL
Choke Size	Tbg. Press. Flwg. 2392 SI	Csg. Press. 2.0	24 Hr. Rate	Oil BBL 0		Gas ACF 3234	Water BBL 624	Ra	as:O atio	il	W	ell Status PGW				
20/64 28a Produc	ction - Interva	<u> </u>				J204				···		. 4.1				
Date First	Test	Hours	Test	Oil		Jas	Water			avity	Ga		Produc	ction Method		
Produced	Date	Tested	Production	BBL	N	ACF	BBL	Co	DEE. 1	API		avity				
Choke Size	Tbg. Press. Flwg. Si	Csg. Press.	24 Hr. Rate	Oil BBL		Gas MCF	Water BBL		as:O atio	il	W	ell Status				

28h Prod	luction - Interv	al C											······································
Date First	Test	Hours	Test	Oil	Gas	Water	Oil Gravity		Gas		Production Method		
Produced	Date	Tested	Production	BBL	MCF	BBL	Corr. API		Gravit	у	:		
Choke	Tbg. Press.	Csg.	24 Hr.	Oil	Gas	Water BBL	Gas:Oil		Well S	Status	1		
Size	Flwg. SI	Press.	Rate	BBL	MCF	BBL	Ratio						
28c. Prod	luction - Interv	al D							· · · · · ·				
Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API		Gas Gravit	у	Production Method		
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio		Well S	Status	J		
29. Dispo	sition of Gas	Sold, used j	for fuel, vent	ed, etc.)									
	nary of Porous	Zones (Inc	clude Aquife	rs):	• • • • • • • • • • • • • • • • • • • •					31. For	mation (Log) Ma	rkers	
Show tests,	all important including dept	zones of po	orosity and c	ontents there	eof: Cored e tool oper	intervals and n, flowing and	l all drill-ste d shut-in pre	m essures					
	Formation		Ton	Battom		Descripti	one Content	te etc			Name		Тор
	Formation		Тор	Bottom		Description	ons, Content					Meas. Depth	
The fi surface ft; LTC ceme well h	ional remarks irst 210 ft of t ce hole was c C P-110 csg nit was perfor itstory, perfor 12 reported T	he surface Irilled with was run fr med on 9 ation repo	e hole was on an 11 inch rom 5037 ft b/26/12 to go ort & final su	drilled with bit. DQX i to 11,278 f et cement to rvey. The	P-110 cso t. A top o o surface rig releas	g was run fro down cemen . Attached i se sn that wa	om surface it job using is the chron as submitte	to 5037 440 sx lological ld		BIF MA WA	EEN RIVER ID'S NEST HOGANY ISATCH SAVERDE		1637 1942 2388 4999 8015
33. Circle	enclosed attac	hments:				<u></u>							
	ectrical/Mecha		(1 full set re	q'd.)		2. Geologic	Report		3.	DST Rep	port	4. Direction	nal Survey
5. Su	ndry Notice fo	r plugging	and cement	verification		6. Core An	alysis		7 (Other:			
34. I herel	by certify that	the foregoi	ing and attac	hed informa	tion is cor	nplete and co	rrect as dete	rmined fro	m all	available	records (see atta	ched instructio	ns):
	•	5	Electr	onic Submi	ission #16	0349 Verifie OIL & GAS	d by the BL	M Well I	nform	ation Sy			
Name	(please print)	LINDSEY	A FRAZIE	R			Ti	itle <u>REGL</u>	JALTO	ORY AN	ALYST		
Signat	ture	(Electroni	ic Submissi	on)			D:	ate <u>11/14/</u>	2012				
Title 18 U	J.S.C. Section ited States any	1001 and T	Title 43 U.S.0	C. Section 1:	212, make	it a crime for	r any person as to any ma	knowingl	y and v	willfully risdiction	to make to any de	epartment or a	gency

Operation Summary Report

Spud Date: 3/19/2012 Well: NBU 921-20F Site: NBU 921-20F Rig Name No: PROPETRO 11/11, PIONEER 54/54 Project: UTAH-UINTAH End Date: 8/24/2012 Event: DRILLING Start Date: 3/4/2012

Active Datum: RKB @4,811.00usft (above Mean Sea

UWI: SE/NW/0/9/S/21/E/20/0/0/26/PM/N/2124/E/0/2189/0/0

Level)		0.0000000000000000000000000000000000000	-		P-12/12/12/12/12	nerves and and			
Date	Tim Start-	End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
3/18/2012	13:00 -	18:30	5.50	MIRU	01	Α	Р		M.I.R.U / J.D. FIELD SERVICES, 2 TRUCKS 2 PERSONAL/ MOUNTAIN WEST OIL FIELD SERVICES, 1 TRUCK & (1) 1TON 3 PERSONAL/ PRO PETRO 10 HANDS / 100% MOVED / TRUCKS OFF LOCATION @ 18:00
	18:30 -	0:00	5,50	MIRU	01	В	·P		MOVE TO NBU 922-30B4CS (WELL 4 OF 4) INSTALL DIVERTOR HEAD AND BLUEY LINE. BUILD DITCH. SPOT IN RIG. SPOT IN CATWALK AND PIPE RACKS. RIG UP PIT PUMP. RIG UP PUMP. PRIME PUMP. INSPECT RIG.
3/19/2012	0:00 -	1:30	1.50	MIRU	01	В	Р		FINISH RIG UP ON NBU 921-20F (WELL 1 OF 1) TALLY INSPECTED DRILL STRING
	1:30 -	2:00	0.50	MIRU	08	В	Z		FIX SWEDGE ON PIT PUMP
	2:00 -	3:00	1.00	MIRU	06	Α	P		PICK UP #1 BHA & DRILL STRING
	3:00 ~	4:30	1.50	DRLSUR	02	·D	P		DRL F/ 44' T/210' (166'@ 110.66' PER HR) WOB, 5-15K RPM 45 UP/DWN/ROT 20/20/20 PSI ON/OFF 600/400 M.W. 8.4# VIS 27
	4:30 -	5:00	0.50	DRLSUR	06	Α	Р		TOOH LDDP & BHA #1
	5:00 -	7:30	2.50	DRLSUR	06	Α	P		POOH PU 11" BIT & DIR. TOOLS (AFTER INSPECTION)
		12:00	4.50	DRLSUR	02	D	Р		DRL F/210' T/820' (610'@ 135.5 ' PER HR) WOB 20K RPM 45 UP/DWN/ROT 54/48/50 PSI ON/OFF 1100/800 M.W. 8.4# VIS 27 1' HIGH 2' LEFT OF TARGET
	12:00 -	0:00	12,00	DRLSUR	02	D	P		DRL F/820 -' T/2200' (1380'@ 115 ' PER HR) WOB 20K RPM 45 UP/DWN/ROT 75/65/70 PSI ON/OFF 1660/1380 M.W. 8.4# VIS 27 1.27' LEFT .61' HIGH OF TARGET
3/20/2012		3:00	3.00	DRLSUR	02	D	P		DRL F/2200' T/2380' (180'@ 51.4 ' PER HR) WOB 20K RPM 45 UP/DWN/ROT 77/66/72 PSI ON/OFF 1710/1420 M.W. 8.4# VIS 27 HAVING TROUBLE WITH POWER HEAD & MWD COMMUNICATIONS TOH 150'
	3:00 -	18:00	15.00	DRLSUR	08	В	Z		LAY DERICK OVER, CHANGE OUT POWER HEAD UNIT, TIH 150' TAG @ 2380'
	18:00 -	23:59	5.98	DRLSUR	02	D	P		DRL F/2380' T/2856' (476'@ 72.9 ' PER HR) WOB 20K RPM 45 UP/DWN/ROT 83/75/78 PSI ON/OFF 1900/1650 M.W. 8.4 # .41' RIGHT - 1.04' LOW OF TARGET
3/21/2012	0:00 -	2:00	2.00	DRLSUR	05	С	P		CIRCULATE FOR CASING

Operation Summary Report

 Well: NBU 921-20F
 Spud Date: 3/19/2012

 Project: UTAH-UINTAH
 Site: NBU 921-20F
 Rig Name No: PROPETRO 11/11, PIONEER 54/54

 Event: DRILLING
 Start Date: 3/4/2012
 End Date: 8/24/2012

Active Datum: RKB @4,811.00usft (above Mean Sea

UWI: SE/NW/0/9/S/21/E/20/0/0/26/PM/N/2124/E/0/2189/0/0

Level)	KB @4,811.00usft (,	-		UWI: SE/NW/0/9/S/21/E/20/0/0/26/PM/N/2124/E/0/2189/0/0							
Date	Time	Duration	Phase	Code	Sub	P/U	MD From	Operation				
	Start-End	(hr)			Code		(usft)					
	2:00 - 6:00	4.00	DRLSUR	06	D	P		LDDS, BHA & DIRECTIONAL TOOLS				
	6:00 - 6:30	0.50	DRLSUR	12	Α	Р		MOVE PIPE RACKS AND CATWALK. PULL DIVERTER HEAD. RIG UP TO RUN CSG. MOVE CSG INTO POSITION TO P/U.				
	6:30 - 9:00	2.50	DRLSUR	12	С	Р		RUN 64 JTS 8 5/8, 28# J55 CASING SET SHOE @ 2821' SET BAFFLE @ 2776.5' LAND CASING @ 09:00				
	9:00 - 9:30	0.50	DRLSUR	12	В	Р		HOLD SAFETY MEETING, PUMP ON CASING RUN 200' OF 1". RIG DOWN RIG MOVE OFF WELL, REBUILD DITCH. RIG UP CEMENT TRUCK, 2" HARD LINES,.				
	9:30 - 12:00	2.50	DRLSUR	12	E	P		HOLD SAFETY MEETING. PRO PETRO CMTERS MAKE UP HEAD & LOAD PLUG TEST LINES TO 2000 PSI. PUMP 50 BBLS OF 8.4# H20 AHEAD, FULL RETURNS PUMP 20 BBLS OF 8.4# GEL WATER AHEAD. PUMP 220 SX(149 BBLS) 11# 3.82 YIELD LEAD CEMENT. PUMP 200 SX (41 BBLS) OF 15.8# 1.15 YIELD TAIL(2% CALC, 1/4# /SK OF FLOCELE). DROP PLUG ON FLY AND DISPLACE W/ 173.6 BBLS OF 8.4# H20. LIFT PRESSURE 600 PSI. BUMP PLUG AND HOLD 900 PSI FOR 5 MIN. FLOAT HELD RETURNS THRU OUT JOB 40 BBLS LEAD CEMENT TO SURF PUMP 125 SX (25.6 BBLS) 15.8# CMT W/4% CALCIUM DOWN 1". CEMENT FELL BACK RELEASE RIG @ 12:00				
	12:00 - 12:00	0.00	DRLSUR	13	Α	Р		WOC, 1.5 HOURS PUMP 85 SKS (17.4 BBLS) CMT TO SURFACE CEMENT HELD CLEAN TRUCKS & RIG DWN CMTERS				
8/13/2012	8:00 - 0:00	16.00	RDMO	01	E	P		RIG DOWN ROTARY TOOL				
8/14/2012	0:00 - 6:00	6.00	RDMO	01	E	P		RIG DOWN, WAIT ON DAYLIGHT				
	6:00 - 18:30	12.50	MIRU	01	Α	P		RIG MOVE 7 MILES TO THE NBU 921-20F (9-HAUL TRUCKS, 6- BED TRUCKS, 2-FORKLIFTS, 2-PUSHERS ON LOC @ 06:30, RELEASED @ 16:30) (J&C CRANE 1 OPERATOR & 4 OILERS, 06:30 TO 18:30) RAISED DERRICK @ 17:00, (9 EXTRA RIG HANDS)				
	18:30 - 21:00	2.50	MIRU	01	В	P		RIG UP TOP DRIVE & GUIDE RAIL, SERVICE LOOP. STAND PIPE, TOTCO & BACK YARD, ELECTRICAL, PUMPS, ETC NIDDLE LIP SWACO				
	21:00 - 22:00	1,00	DRLPRV	14	A	P		NIPPLE UP SWACO NIPPLE UP BOPE				
	22:00 - 0:00	2.00	DRLPRV	14	A	P						
8/15/2012	0:00 - 1:00	1.00	DRLPRV	14	Α	P		NIPPLE UP BOPE, CHOKE LINE, GAS BUSTER, FLARE LINES				
	1:00 - 5:00	4.00	DRLPRV	15	Α	Р		TEST BOPE, PIPE RAMS, BLIND RAMS, INNER & OUTER CHOKE VALVES, KILL LINE, 250 LOW-5000 HIGH, ANN 250 LOW-2500 HIGH				
	5:00 - 6:00	1.00	DRLPRV	15	Α	Р		TEST MI SWACO 250 LOW 1000 HIGH				
	6:00 - 8:00	2.00	DRLPRV	22	L	Z		REPAIR SWACO AIRLINES				
	8:00 - 11:00	3.00	DRLPRV	22	L	Z		REPLACE SMITH ROTATING HEAD, UNABLE TO TEST				
	11:00 - 12:00	1.00	DRLPRV	15	Α	P		TEST MI SWACO 250 LOW- 1000 HIGH				
	12:00 - 12:30	0.50	DRLPRV	14	В	P		INSTALL WEAR BUSHING				

Operation Summary Report

 Well: NBU 921-20F
 Spud Date: 3/19/2012

 Project: UTAH-UINTAH
 Site: NBU 921-20F
 Rig Name No: PROPETRO 11/11, PIONEER 54/54

 Event: DRILLING
 Start Date: 3/4/2012
 End Date: 8/24/2012

Active Datum: RKB @4,811,00usft (above Mean Sea

UWI: SE/NW/0/9/S/21/E/20/0/0/26/PM/N/2124/E/0/2189/0/0

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Date		Time	Duration	Phase	Code	Sub	P/U	MD From Operation
		art-End - 16:00	(hr) 3,50	DRLPRV	06	Code A	Р	(usft) HELD SAFETY MEETING WITH P/U, RIG & DIR CREWS, R/U & P/U BHA & SCRIBE, P/U HWDP & D/P TO TOP OF CEMENT OF 2700'
	16:00	- 16:30	0.50	DRLPRV	09	Α	Р	CUT & SLIP DRILL LINE
		- 19:30	3.00	DRLPRV	06	Н	Z	PULL OUT OF HOLE & REPLACE MWD TOOL, (HAD GOOD ROLL TEST & TEST ON SURFACE, RUNNING IN HOLE STARTED TO LOSS SIGNAL, AFTER PICKING UP PIPE, TRIP OUT & REPLACE TOOL)
	19:30	- 21:30	2.00	DRLPRV	02	F	P	DRILL CEMENT, BAFFLE , SHOE & OPEN HOLE TO 2871, SHOE @ 2881', BAFFLE @ 2790'
	21:30	- 0:00	2.50	DRLPRV	02	В	Р	CLOSED LOOP SYSTEM DRILL F/ 2871 TO 3170', 299' @ 119.6' PH WOB / 20-22 RPM TOP DRIVE 50-60 SPM 200 GPM 586 MW 8.5 PPG 26 VIS TRQ ON/OFF = 4-7 K PSI ON /OFF 1800-1500, DIFF 200-500 PU/SO/RT = 100-80-90 K LOST 0 BBLS TO FORMATION SLIDE = ROT = 100% NOV/ 2- CONVENTIONAL 5' S & 2.5 E OF TARGET CENTER SWACO ON LINE @ 3100', 0 DRILL FLARE, 0 CONN FLARE
8/16/2012	0:00	- 16:00	16.00	DRLPRV	02	В	P	ANN PSI - DRILLING 160, CONN 200 CLOSED LOOP SYSTEM DRILL F/ 3170' TO 5125', 1955' @ 122.2' PH WOB / 22-24 RPM TOP DRIVE 50-60 SPM 200 GPM 586 MW 8.8 PPG 35 VIS TRQ ON/OFF = 4-7 K PSI ON /OFF 2200-1800, DIFF 200-500 PU/SO/RT = 120-100-110 K LOST 120 BBLS TO FORMATION, DUE TO SWACO SHUT IN PSI OF 1300 ON CONN SLIDE = 50' IN .67 HRS = 74.6' PH ROT = 1905' IN 15.33 HRS = 124.3' PH NOV/ 2- CONVENTIONAL 19' S & 6.7 E OF TARGET CENTER SWACO ON LINE @ 3100' 0 DRILL FLARE, 0 CONN FLARE ANN PSI - DRILLING 160, CONN 200
	16:00	- 16:30	0.50	DRLPRV	07	Α	Р	SERVICE RIG, BOP DRILL 68 SEC, F/T ANN & HCR VALVE

11/6/2012 10:11:26AM

Operation Summary Report

Well: NBU 921-	20F				<u> </u>			Spud Date: 3/19/2012
Project: UTAH-I	HATMIL			Site: NBU	921-20F	:		Rig Name No: PROPETRO 11/11, PIONEER 54/54
Event: DRILLIN	G			Start Date	: 3/4/201	2		End Date: 8/24/2012
Active Datum: RKB @4,811.00usft (above Mean Level)		ove Mean S	Sea	UWI: SI	UWI: SE/NW/0/9/S		0/0/0/26/PM/N/2124/E/0/2189/0/0	
Date	THE RESERVE	Time art-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From Operation (usft)
		- 19:00	2.50	DRLPRV	02	В	P	CLOSED LOOP SYSTEM DRILL F/ 5125 TO 5343', 218' @ 87.2' PH WOB / 22-24 RPM TOP DRIVE 50-60 SPM 200 GPM 586 MW 8.8 PPG 36 VIS TRQ ON/OFF = 4-7 K PSI ON /OFF 2200-1800, DIFF 200-500 PU/SO/RT = 125-100-115 K SLIDE = 32' IN .5 HRS = 64' PH ROT = 186' IN 2 HRS = 93' PH NOV/ 2- DEWATERING 19' S & 6.6 E OF TARGET CENTER SWACO ON LINE @ 3100' 0 DRILL FLARE, 0 CONN FLARE
	19:00	- 21:00	2.00	DRLPRV	08	Α	Р	ANN PSI - DRILLING 160, CONN 200 SCHEDULED MAINTENANCE ON TOP DRIVE (
		- 23:30 - 0:00	2.50	DRLPRV	02	В	P	TRUBLE SHOOT OIL PSI) CLOSED LOOP SYSTEM DRILL F/ 5343 TO 5567', 224' @ 89.6' PH WOB / 22-24 RPM TOP DRIVE 50-60 SPM 200 GPM 586 MW 8.8 PPG 39 VIS TRQ ON/OFF = 4-7 K PSI ON /OFF 2300-1900, DIFF 200-500 PU/SO/RT = 130-100-115 K SLIDE = 27' IN .5 HRS = 54' PH ROT = 197' IN 2 HRS = 98.5' PH NOV/ 2- CONVENTIONAL 14'S & 4.6 E OF TARGET CENTER SWACO ON LINE @ 3100' 0 DRILL FLARE, 0 CONN FLARE ANN PSI - DRILLING 160, CONN 200 CHANGE OUT PUMP PARTS
8/17/2012	0:00	- 11:30	11.50	DRLPRV	02	В	P	CLOSED LOOP SYSTEM DRILL F/ 5567' TO 6548', 981' @ 85.3' PH WOB / 22-24 RPM TOP DRIVE 50-60 SPM 200 GPM 586 MW 8.9 PPG 39 VIS TRQ ON/OFF = 4-7 K PSI ON /OFF 2400-2000, DIFF 200-500 PU/SO/RT = 160-130-145 K SLIDE = 14' IN .25 HRS = 28' PH ROT = 967' IN 11 HRS = 87.9' PH NOV/ 2- CONVENTIONAL 21N & 14W OF TARGET CENTER SWACO ON LINE @ 3100' 0 DRILL FLARE, 0 CONN FLARE ANN PSI - DRILLING 160, CONN 200 NO MUD LOSS

Vell: NBU 921-2	20F							Spud Date: 3/19/2012
Project: UTAH-UINTAH Site: NBU					921-20F	;		Rig Name No: PROPETRO 11/11, PIONEER 54/54
Event: DRILLING Start Date			e: 3/4/201	2		End Date: 8/24/2012		
ctive Datum: R	KB @4.81	1.00usft (at	ove Mean S				/S/21/E/2	0/0/0/26/PM/N/2124/E/0/2189/0/0
Active Datum: RKB @4,811.00usft (above Mean Sea Level)								
Date	(1) 10 mm (1) 1	ime t-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From Operation (usft)
	11:30	- 14:00	2.50	DRLPRV	08	В	P	SCHEDULED MAINTENANCE (TROUBLE SHOOT OIL PSI & HEAT ON TOP DRIVE WITH NOV TECH'S FROM HOUSTON) (DID NOT FIX IT), PULL 2 STANDS OFF BOTTOM, DID NOT FIND PROBLEM, OFFICE SAID RUN IT & WILL REPLACE OR FIX ON RIG MOVE CLOSED LOOP SYSTEM DRILL F/ 6548' TO 6831', 283' @ 80.8' PH WOB / 22-24 RPM TOP DRIVE 50-60 SPM 200 GPM 586 MW 9.0 PPG 39 VIS TRQ ON/OFF = 4-7 K PSI ON /OFF 2400-2000, DIFF 200-500 PU/SO/RT = 160-130-145 K SLIDE = 20' IN .42 HRS = 47.6' PH ROT = 263' IN 3.08 HRS = 85.4' PH NOV/ 2- DEWATERING, ADD GYP TO RAISE HARDNESS TO CUT BETTER 27N & 17W OF TARGET CENTER SWACO ON LINE @ 3100' 0 DRILL FLARE, 0 CONN FLARE ANN PSI - DRILLING 160, CONN 200
	17:30	- 18:00	0.50	DRLPRV	07	Α	Р	NO MUD LOSS SERVICE RIG, BOP DRILL 69 SEC, F/T ANN & HCR, F/T CROWN-O-MATIC
	18:00	- 0:00	6.00	DRLPRV	02	В	P	CLOSED LOOP SYSTEM DRILL F/ 6831' TO 412' @ 68.6' PH WOB / 22-24 RPM TOP DRIVE 50-60 SPM 200 GPM 586 MW 9.0 PPG 35 VIS TRQ ON/OFF = 4-7 K PSI ON /OFF 2400-2000, DIFF 200-500 PU/SO/RT = 170-145-160 K SLIDE = ROT = 100% NOV/ 2-DEWATERING 50' N & 20' W OF TARGET CENTER SWACO ON LINE @ 3100' 0 DRILL FLARE, 0 CONN FLARE

10:11:26AM

11/6/2012

NO MUD LOSS

Operation Summary Report

Vell: NBU 921-	20F						Sp	ud Date: 3/19/2012
Project: UTAH-UINTAH Site: NBU				921-20F			Rig Name No: PROPETRO 11/11, PIONEER 54/54	
			Start Date	: 3/4/201	2		End Date: 8/24/2012	
						/S/21/E/20/0/0	/26/PM/N/2124/E/0/2189/0/0	
evel)		•						
Date	2.0	Time art-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From Operation (usft)
8/18/2012	0:00	- 13:30	13,50	DRLPRV	02	В	Р	CLOSED LOOP SYSTEM
								DRILL F/ 7243 TO 8064', 821' @ 60.8' PH
								WOB / 22-24
								RPM TOP DRIVE 50-60
								SPM 200 GPM 586 MW 9.0 PPG 36 VIS
								TRQ ON/OFF = 4-7 K
								PSI ON /OFF 2400-2000, DIFF 200-500
								PU/SO/RT = 180-155-170 K
								SLIDE = 32' IN .83 HRS = 38.5' PH
								ROT = 789' IN 12.67 HRS = 62.3' PH
								NOV/ 2-DEWATERING, MIXING GYP FOR
								HARDNESS TO HELP CUT DRYER
								65' N & 20' W OF TARGET CENTER
								SWACO ON LINE @ 3100' ANN PSI - DRILLING 180, CONN 200
								0 DRILL FLARE, 0 CONN FLARE
								NO MUD LOSS
	13:30	- 14:00	0.50	DRLPRV	07	Α	P	SERVICE RIG, CHANGE OIL IN TOP DRIVE
	14:00	- 0:00	10.00	DRLPRV	02	В	Р	CLOSED LOOP SYSTEM
								DRILL F/ 8064' TO 8632', 568' @ 56.8' PH
								WOB / 22-24
								RPM TOP DRIVE 50-60
								SPM 200 GPM 586
								MW 9.1 PPG 36 VIS
								TRQ ON/OFF = 4-7 K
								PSI ON /OFF 2500-2100, DIFF 200-500 PU/SO/RT = 190-166-180 K
								SLIDE =
								ROT = 100%
								NOV/ 1-DEWATERING, 1-CONVENTIONAL
								74' N & 18' W OF TARGET CENTER
								SWACO ON LINE @ 3100'
								ANN PSI - DRILLING 190, CONN 300
								FLARE CAME IN @ 8500'
								5 DRILL FLARE, 10 CONN FLARE 80 MUD LOSS TO SEEPAGE @ 8500'
8/19/2012	0.00	- 17:00	17.00	DRLPRV	02	В	P	CLOSED LOOP SYSTEM
0/10/2012		44,00	11.00	21121111		-		DRILL F/ 8632' TO 9677', 1045' @ 61.5' PH
								WOB / 22-24
								RPM TOP DRIVE 50-60
								SPM 180 GPM 528
								MW 9.1 PPG 37 VIS
								TRQ ON/OFF = 6-8 K
								PSI ON /OFF 2500-2100, DIFF 200-500 PU/SO/RT = 210-175-185 K
								SLIDE = 0
								ROT = 100%
								NOV/ 1-DEWATERING, 1-CONVENTIONAL
								63' N & 4' W OF TARGET CENTER
								SWACO ON LINE @ 3100'
								ANN PSI - DRILLING 230, CONN 400
								FLARE CAME IN @ 9150'
								10 DRILL FLARE, 20 CONN FLARE
								40 BBL MUD LOSS TO SEEPAGE

					Opera	tion S	umma	ıry Report	
Well: NBU 921-2	:0F	<u> </u>						Spud Date: 3/19/	2012
Project: UTAH-UINTAH Site: NBU					921-20F				Rig Name No: PROPETRO 11/11, PIONEER 54/54
			: 3/4/2012				End Date: 8/24/2012		
		Ousft (above	Mean Se				S/21/E/20	0/0/0/26/PM/N/212	4/E/0/2189/0/0
Active Datum: RKB @4,811.00usft (above Mean Sea Level)									
Date	Time Start-E	25.20.20.00	uration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	17:00 - ·		0.50 6.50	DRLPRV	07 02	В	P P		SERVICE RIG, BOP DRILL 69 SEC, F/T ANN & HCR VALVE CLOSED LOOP SYSTEM DRILL F/ 9677 TO 9996', 319' @ 49' PH
									WOB / 22-24 RPM TOP DRIVE 50-60 SPM 180 GPM 528 MW 9.8 PPG 40 VIS TRQ ON/OFF = 6-8 K PSI ON /OFF 2500-2100, DIFF 200-500 PU/SO/RT = 225-170-200 K SLIDE = 0 ROT = 100% NOV/ 1-DEWATERING, 1-CONVENTIONAL 55' N & 2' E W OF TARGET CENTER SWACO ON LINE @ 3100' ANN PSI - DRILLING 220, CONN 400 FLARE CAME IN @ 9150' 10 DRILL FLARE, 20 CONN FLARE 40 BBL MUD LOSS TO SEEPAGE PUMPING 10 BBL 10% SWEEPS
8/20/2012	0:00 - 4	14:00	14.00	DRLPRV	02	В	P		CLOSED LOOP SYSTEM DRILL F/ 9,996' TO 10531', 535' @ 38.2' PH WOB / 22-24 RPM TOP DRIVE 50-60 SPM 180 GPM 528 MW 10.5 PPG 40 VIS TRQ ON/OFF = 6-8 K PSI ON /OFF 2500-2100, DIFF 200-500 PU/SO/PU 225-185-200 K SLIDE = 0 ROT = 100% NOV/ 1-CONVENTIONAL, 1 OUT OF SERVICE 35'N & 15' E OF TARGET CENTER SWACO ON LINE @ 3100' ANN PSI - DRILLING 220, CONN 400 FLARE CAME IN @ 9150'

11/6/2012 10:11:26AM

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14:00 - 14:30

0.50

DRLPRV

07

10 DRILL FLARE, 20 CONN FLARE PUMPING 10 BBL 10% SWEEPS

SERVICE RIG

Operation Summary Report

 Well: NBU 921-20F
 Spud Date: 3/19/2012

 Project: UTAH-UINTAH
 Site: NBU 921-20F
 Rig Name No: PROPETRO 11/11, PIONEER 54/54

 Event: DRILLING
 Start Date: 3/4/2012
 End Date: 8/24/2012

Active Datum: RKB @4,811.00usft (above Mean Sea

UWI: SE/NW/0/9/S/21/E/20/0/0/26/PM/N/2124/E/0/2189/0/0

Active Datum: Ri Level)	bove Mean S	ea	UWI: SE/NW/0/9/S/21/E/20/0/0/26/PM/N/2124/E/0/2189/0/0							
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/Ü	MD From Operation (usft)			
	14:30 - 0:00	9.50	DRLPRV	02	В	P	CLOSED LOOP SYSTEM DRILL F/ 10531' TO 10840', 309' @ 32.5' PH WOB / 22-24 RPM TOP DRIVE 50-60 SPM 170 GPM 498 MW 11 PPG 40 VIS TRQ ON/OFF = 6-8 K PSI ON /OFF 2500-2100, DIFF 200-500 PU/SO/PU 225-185-200 K SLIDE = 0 ROT = 100% NOV/ 1-CONVENTIONAL, 1 OUT OF SERVICE 39' N & 18' E OF TARGET CENTER SWACO ON LINE @ 3100' ANN PSI - DRILLING 220, CONN 400 FLARE CAME IN @ 9150' 10 DRILL FLARE, 20 CONN FLARE			
8/21/2012	0:00 - 17:30 17:30 - 18:00	17.50 0.50	DRLPRV	02	В	P	PUMPING 10 BBL 10% SWEEPS CLOSED LOOP SYSTEM DRILL F/ 10840' TO 11,292', 452' @ 25.8' PH TD WELL @ 17:30 WOB / 24-26 RPM TOP DRIVE 50-60 SPM 160 GPM 440 MW 12.1 PPG 41 VIS TRQ ON/OFF = 7-8 K PSI ON /OFF 2700-2400, DIFF 200-500 PU/SO/PU 225-185-200 K SLIDE = 0 ROT = 100% NOV/ 2- BYPASS, REPLACE 1 CENTRIFUGE 24.35 N & 27.95 E OF TARGET CENTER SWACO ON LINE @ 3100', OFF LINE @ 11,170' ANN PSI - DRILLING 160, CONN 200 0 DRILL FLARE, 0 CONN FLARE PUMPING 10 BBL 10% SWEEPS SERVICE RIG, TAKE TD SURVEY			
	18:00 - 20:30	2.50	DRLPRV	05	F	P	CIRC & COND MUD, RAISE MW TO 12.3, BRING LCM TO 5% DO TO LOSS @ 12.3 MW, LOST 40 BBLS			
	20:30 - 0:00	3.50	DRLPRV	06	E	Р	SHORT TRIP TO SHOE			
8/22/2012	0:00 - 2:30	2,50	DRLPRV	08	В	P	SCHEDULED MAINTENANCE, WORK ON TOP DRIVE OILERS, FOUND BEARING GOING OUT, NEW TOP DRIVE REPLACEMENT ON IT'S WAY FROM HOUSTON, WILL INSTALL ON RIG MOVE			
	2:30 - 6:30	4.00	DRLPRV	06	E	Р	TRIP IN HOLE, WASH TIGHT SPOT @ 10,300' TO 10,600 (RIGHT WEAR GAS KICK CAME FROM) TRIP IN HOLE TO TD OF 11,292', NO LOSS ON TRIP			
	6:30 - 9:00	2.50	DRLPRV	05	В	₽	RAISE MW TO 12.5, LCM TO 10%			
	9:00 - 15:30	6.50	DRLPRV	06	E	Р	2nd WIPER TRIP TO SHOE & BACK, CLEAN, NO LOSS			
	15:30 - 16:00	0.50	DRLPRV	07	Ά	P	SERVICE RIG			
	16:00 - 19:00	3.00	DRLPRV	05	С	Р	CIRC & COND HOLE, MAINTAIN 12.5 MW & 10% LCM			
	19:00 - 0:00	5,00	DRLPRV	06	В	Р	HELD SAFETY MEETING WITH RIG & KIMZEY CREWS, RIG UP & LAYDOWN DRILL STRING			
8/23/2012	0:00 - 3:00	3.00	DRLPRV	06	В	P	LAYDOWN DRILL STRING, BHA & DIR TOOLS			

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					Opera	ition S	Summa	ary Report	
Well: NBU 921-2	0F			4.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1	STATE OF STREET	20102-2010-2010	- 16/3802/1045-171	Spud Date: 3/19	/2012
Project: UTAH-U	INTAH			Site: NBL	921-20F	:			Rig Name No: PROPETRO 11/11, PIONEER 54/54
Event: DRILLING	;		· · · · · · · · · ·	Start Date	e: 3/4/201	12			End Date: 8/24/2012
Active Datum: Rh Level))/S/21/E/2	0/0/0/26/PM/N/212	4/E/0/2189/0/0
Date	1.00	Time tart-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	3:00	- 8:30	5,50	DRLPRV	11	С	Р	,	HELD SAFETY MEETING, RIG UP & RUN OPEN HOLE LOGS TO 8184' BRIDGED OUT, LOG OUT, RIG DOWN
	8:30	- 9:00	0.50	DRLPRV	14	В	P		PULL WEAR BUSHING
	9:00	- 18:00	9.00	DRLPRV	12	С	P		HELD SAFETY MEETING WITH RIG & CASING CREWS, RIG UP & RUN 140 JTS P-110 LTC, 1 X/O & 112 DQX P-110 4.5" PROD CASING, SHOE @ 11,277', FLOAT @ 11,231', B/H MARKER @ 10,698', MESA MARKER @ 7983', X/O @ 5036', LAND CASING, RIG DOWN CASING CREW CIRC HOLE CLEAN TO CEMENT
		10/00	1.50	DRLPRV		_	-		
	19:30	- 0:00	4.50	DRLPRV	12	E	Р		HELD SAFETY MEETING WITH RIG & CEMENTING CREWS, RIG UP & PSI TEST LINES TO 5000, DROP

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BOTTOM PLUG, PUMP 25 BBL WATER SPACER, LEAD 690 SACKS, 1.77 YLD 13 PPG, TAIL 14.3 PPG, 1.32 YLD WITH .5% EC-1, DROP PLUG & DISPLACE WITH 174.5 BBLS CLAYTREAT WATER, LOST RETURNS 80 BBLS INTO DISPLACEMENT, BUMP PLUG @ 4149 PSI (686 PSI OVER FINAL LIFT OF 3463), FLUSH STACK, CLEAN LINES & RIG DOWN SET PACKOFF WITH 110 K ON HANGER

N/D BOPE, CLEAN PITS & RELEASE RIG TO THE NBU

N/D SWACO

921-8D @ 06:00 8/24/12

9

8/24/2012

0:00 - 1:00

1:00 - 3:00

3:00 - 6:00

1.00

2.00

3.00

DRLPRV

DRLPRV

DRLPRV

14

14

1 General

1.1 Customer Information

Company	US ROCKIES REGION
Representative	
Address	

1.2 Well/Wellbore Information

Well	NBU 921-20F	Wellbore No.	ОН	
Well Name	NBU 921-20F	Wellbore Name	NBU 921-20F	
Report No.	1	Report Date	9/24/2012	
Project	UTAH-UINTAH	Site	NBU 921-20F	
Rig Name/No.		Event	COMPLETION	
Start Date	10/9/2012	End Date	10/16/2012	
Spud Date	3/19/2012	Active Datum	RKB @4,811.00usft (above Mean Sea Level)	
UWI	SE/NW/0/9/S/21/E/20/0/0/26/PM/N/2124/E/0/	2189/0/0		

1.3 General

Contractor	Job Method	Supervisor	
Perforated Assembly	Conveyed Method		

1.4 Initial Conditions

1.5 Summary

Fluid Type		Fluid Density	Gross Interval	8,028.0 (usft)-11,061.0 (us	Start Date/Time	10/9/2012 12:00AM
Surface Press		Estimate Res Press	No. of Intervals	58	End Date/Time	10/9/2012 12:00AM
TVD Fluid Top		Fluid Head	Total Shots	201	Net Perforation Interval	67.00 (usft)
Hydrostatic Press		Press Difference	 Avg Shot Density	3.00 (shot/ft)	Final Surface Pressure	
Balance Cond	NEUTRAL				Final Press Date	

2 Intervals

2.1 Perforated interval

Date	Formation/	CCL@	CCL-T	MD Top	MD Base	Shot	Misfires/	Diamete	Carr Type /Stage No	Carr	Phasing	Charge Desc/Charge	Charge	Reason	Misrun
	Reservoir	(usft)	S	(usft)	(usft)	Density	Add. Shot	Г		Size	(°)	Manufacturer	Weight	1	1
			(usft)			(shot/ft)		(in)		(in)			(gram)		
10/9/2012	MESAVERDE/			8,028.0	8,030.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	
12:00AM														N	

2.1 Perforated Interval (Continued)

10/9/2012 MES/ 12:00AM 10/9/2012 MES/ 12:00AM 10/9/2012 MES/ 12:00AM 10/9/2012 MES/ 12:00AM 10/9/2012 MES/ 12:00AM 10/9/2012 MES/ 12:00AM	SAVERDE/ SAVERDE/	 (usft)	8,044.0 8,146.0	8,046.0 8,149.0	(shot/ft) 3.00	 (in)		(in)				,
10/9/2012 MES/ 12:00AM 10/9/2012 MES/ 12:00AM 10/9/2012 MES/ 12:00AM 10/9/2012 MES/ 12:00AM 10/9/2012 MES/	SAVERDE/			8,149.0		0.500	EXP/	3.375	120.00	 (gram) 23.00 I	PRODUCTIO	1
12:00AM 10/9/2012 MES/ 12:00AM 10/9/2012 MES/ 12:00AM 10/9/2012 MES/ 12:00AM 10/9/2012 MES/	SAVERDE/			8,149.0						l	4	
10/9/2012 MES, 12:00AM 10/9/2012 MES, 12:00AM 10/9/2012 MES, 12:00AM 10/9/2012 MES,	SAVERDE/				3.00	0.360	EXP/	3.375	120.00		PRODUCTIO	
12:00AM 10/9/2012 MES/ 12:00AM 10/9/2012 MES/ 12:00AM 10/9/2012 MES/	SAVERDE/		0 252 0	8,253.0	3.00	0.360	EVD(0.075	400.00		V	
12:00AM 10/9/2012 MES/ 12:00AM 10/9/2012 MES/			8,252.0	0,255.0	3.00	0.360	EXPI	3.375	120.00		PRODUCTIO N	ļ
10/9/2012 MES/ 12:00AM 10/9/2012 MES/	SAVERDE/		8,267.0	8,268.0	3.00	0.360	EXP/	3.375	120.00		PRODUCTIO	
12:00AM 10/9/2012 MES	SAVERDE/										N	ļ
10/9/2012 MES			8,293.0	8,294.0	3.00	0.360	EXP/	3.375	120.00	23.00 1	PRODUCTIO	1
i .											N	
	SAVERDE/		8,402.0	8,403.0	3.00	0.360	EXP/	3.375	120.00		PRODUCTIO	
10/9/2012 MES	SAVERDE/		8.415.0	8,416.0	3.00	0.360	EXP/	3.375	120.00		N PRODUCTIO	i
12:00AM	, (0 L) (D L)		0,410.0	0,410.0	0.00	0.500	L70 /	0.010	120.00		N CDOCIO	
10/9/2012 MES	SAVERDE/		8,488.0	8,489.0	3.00	0.360	EXP/	3.375	120.00		PRODUCTIO	
12:00AM											N	
10/9/2012 MES	SAVERDE/		8,516.0	8,517.0	3.00	0.360	EXP/	3.375	120.00		PRODUCTIO	
12:00AM	NAVEDDE/		0.500.0	0.500.0	0.00			0.075	400.00		V	
10/9/2012 MES/ 12:00AM	SAVERDE/		8,588.0	8,589.0	3.00	0.360	EXP/	3.375	120.00		PRODUCTIO N	
10/9/2012 MES	SAVERDE/		8,623.0	8,624.0	3.00	0.360	EXP/	3.375	120.00		PRODUCTIO	
12:00AM			-,	0,02	0.00	0.000		0.070	120.00		N	
10/9/2012 MES	SAVERDE/		8,659.0	8,661.0	3.00	0.360	EXP/	3.375	120.00	23.00	PRODUCTIO	
12:00AM											Ν	İ
10/9/2012 MES 12:00AM	SAVERDE/		8,723.0	8,724.0	3.00	0.360	EXP/	3.375	120.00		PRODUCTIO	
10/9/2012 MES	SAVERDE/		8,750.0	8,752.0	3.00	0.360	EXP/	3.375	120.00		N PRODUCTIO	
12:00AM			0,700.0	0,702.0	3.00	0.500	LX(*)	3.313	120.00		N	:
10/9/2012 MES	SAVERDE/		8,791.0	8,792.0	3.00	0.360	EXP/	3.375	120.00		PRODUCTIO	
12:00AM											N	
10/9/2012 MES	SAVERDE/		9,009.0	9,010.0	3.00	0.360	EXP/	3.375	120.00		PRODUCTIO	
12:00AM	AVEDDE!		0.007.0	0.000.0	0.00	0.000	EVD(0.075	400.00		N	
10/9/2012 MES. 12:00AM	SAVERUE/		9,027.0	9,028.0	3.00	0.360	EXP/	3.375	120.00		PRODUCTIO N	
10/9/2012 MES	SAVERDE/		9.049.0	9.050.0	3.00	0.360	EXP/	3.375	120.00		PRODUCTIO	
12:00AM			-,	-,		0.000		0.070	120.00		N	
10/9/2012 MES	SAVERDE/		9,087.0	9,088.0	3.00	0.360	EXP/	3.375	120.00	23.00	PRODUCTIO	
12:00AM											N	
10/9/2012 MES.	SAVERDE/		9,174.0	9,175.0	3.00	0.360	EXP/	3.375	120.00		PRODUCTIO	
12:00AM 10/9/2012 MES	CAVEDDE/		0.245.0	0.246.0	2 00	0.000	EVD/	2 275	120.00		N	
12:00AM			9,215.0	9,216.0	3.00	0.360	EXP/	3.375	120.00		PRODUCTIO N	

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
10/9/2012 12:00AM	MESAVERDE/			9,231.0	9,232.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
10/9/2012 12:00AM	MESAVERDE/			9,309.0	9,310.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
10/9/2012 12:00AM	MESAVERDE/			9,342.0	9,343.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
10/9/2012 12:00AM	MESAVERDE/			9,370.0	9,371.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1	MESAVERDE/			9,394.0	9,395.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
10/9/2012 12:00AM	MESAVERDE/			9,420.0	9,421.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
10/9/2012 12:00AM	MESAVERDE/			9,441.0	9,442.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1	MESAVERDE/			9,476.0	9,477.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1	MESAVERDE/			9,494.0	9,495.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			9,562.0	9,563.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			9,613.0	9,614.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			9,638.0	9,639.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1	MESAVERDE/			9,670.0	9,671.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1	MESAVERDE/			9,695.0	9,696.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
(MESAVERDE/			9,744.0	9,745.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1	MESAVERDE/			9,761.0	9,762.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			9,771.0	9,772.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			9,824.0	9,825.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			9,840.0	9,841.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			9,881.0	9,882.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1	MESAVERDE/			9,963.0	9,964.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	·

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc/Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
10/9/2012	MESAVERDE/			10,004.0	10,005.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	1
12:00AM														N	
10/9/2012 12:00AM	MESAVERDE/			10,075.0	10,077.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
10/9/2012 12:00AM	MESAVERDE/			10,768.0	10,770.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	:
10/9/2012	MESAVERDE/			10,796.0	10,797.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	
12:00AM														N	
10/9/2012 12:00AM	MESAVERDE/			10,823.0	10,824.0	3.00		0.360	EXP/	3.375	120.00		23.0	PRODUCTIO N	
10/9/2012 12:00AM	MESAVERDE/			10,834.0	10,836.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
10/9/2012	MESAVERDE/			10,848.0	10,849.0	3.00		0.360	EXP/	3.375	120.00		23.0	PRODUCTIO	
12:00AM														N	
10/9/2012 12:00AM	MESAVERDE/			10,859.0	10,860.0	3.00		0.360	EXP/	3.375	120.00		23.0	O PRODUCTIO N	
10/9/2012 12:00AM	MESAVERDE/			10,914.0	10,915.0	3.00		0.360	EXP/	3.375	120.00		23.0	PRODUCTIO N	
10/9/2012 12:00AM	MESAVERDE/			10,937.0	10,938.0	3.00		0.360	EXP/	3.375	120.00		23.0	PRODUCTIO N	
	MESAVERDE/			10,944.0	10,945.0	3.00		0.360	EXP/	3.375	120.00		23.0	PRODUCTIO N	
10/9/2012 12:00AM	MESAVERDE/			10,946.0	10,947.0	3.00		0.360	EXP/	3.375	120.00		23.0	PRODUCTIO N	
	MESAVERDE/			10,974.0	10,974.0	3.00		0.360	EXP/	3.375	120.00		23.0	0 PRODUCTIO	
12:00AM														N	
10/9/2012 12:00AM	MESAVERDE/			11,032.0	11,033.0	3.00		0.360	EXP/	3.375	120.00		23.0	0 PRODUCTIO N	
10/9/2012 12:00AM	MESAVERDE/			11,051.0	11,052.0	3.00		0.360	EXP/	3.375	120.00		23.0	0 PRODUCTIO N	
	MESAVERDE/			11,060.0	11,061.0	3.00		0.360	EXP/	3.375	120.00		23.0	0 PRODUCTIO N	

3 Plots

Operation Summary Report

NA III NIDII 004						· · · · · · · · · · · · · · · · · · ·	Spud Date: 3/1	19/2012
Well: NBU 921-			Site: NRI	 J 921-20F			Spud Date: 3/	Rig Name No: SWABBCO 6/6, SWABBCO 6/6
Project: UTAH-U			+			1		
Event: COMPLE			_	e: 10/9/20		10/04/5/0	VO IO IO CIDE EIN IO	End Date: 10/16/2012
Active Datum: R Level)	KB @4,811.00usft (above Mean Se	a	UVVI: SE	:/NVV/0/9	/S/21/E/20	1/0/0/26/PIVI/N/21	124/E/0/2189/0/0
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
9/24/2012	8:00 - 8:15	0.25	FRAC	48		Р		HELD SAFETY MEETING , HIGH PRESSURE
9/26/2012	7:00 - 7:15 7:15 - 10:00	3.25 0.25 2.75	FRAC FRAC	48 51	В	P P		FILL SURFACE CSG. MIRU B&C QUICK TEST. FILL 4 1/2 WITH 17 BBLS TMAC PSI TEST T/ 1000 PSI. HELD FOR 15 MIN LOST 11 PSI. PSI TEST T/ 3500 PSI. HELD FOR 15 MIN LOST 55 PSI. 1ST PSI TEST T/ 9000 PSI. HELD FOR 30 MIN LOST 87 PSI. NO COMMUNICATION OR MIGRATION WITH SURFACE CSG BLEED OFF PSI.SWIFN RU HOT OILER FILLED SURFACE WITH TMAC, PRESSURED TO 750 PSI ESTABLISHED INJECTION RATE DOWN SURFACE @ 2 BPM, 600 PSI, PUMPED 10 BBLS, ISIP 500 PSI SWI HELD SAFETY MEETING: FACE MASKS FOR CEMENT RU SCHLUMBERGER, TEST PUMP & LINES ESTABLISH INJESTION RATE 3 BPM 450 PSI, PREFORMED TOP JOB AS FOLLOWS
9/27/2012 9/28/2012 9/29/2012 10/9/2012	- - 7:00 - 7:15 7:15 - 18:00	0.25 10.75 0.25	FRAC FRAC	48 30 48		P P		PUMPED 10 BBLS FRESH WATER PUMPED 10 BBLS S001 WATER PUMPED 10 BBLS FRESH WATER PUMPED 10 BBLS ZONE LOCK PUMPED 10 BBLS FRESH WATER PUMPED 10 BBLS FRESH WATER PUMPED 440 SKS THIXOTROPIC CLASS G CEMENT 151 BBLS, CEMENT @ 12.5 PPG CEMENT PUMPED 3 BBL DISPLACEMENT AVERAGE PRESSURE 563 PSI AVERAGE RATE 2.9 BPM, ISIP 450 PSI SHUT WELL IN WITH 350 PSI. TOTAL FLUID PUMPED 204 BBLS JSA= MOVING EQUIP RD RIG ON NBU 1022-4M MOVE RIG & EQUIP TO LOC RU RIG ND W/H NU BOPS RU FLOOR & TUBING EQUIP TALLY & PU TUBING 250 JNTS EOT @ 7904' POOH SIW SDFN JSA= W/L SAFETY

11/6/2012 10:19:14AM

				U	S ROC	KIES RE	GION			
				Opera	tion S	Summa	ry Report			
Well: NBU 921-2	20F						Spud Date: 3/19	0/2012		
Project: UTAH-L	JINTAH		Site: NB	U 921-20F	:			Rig Name No: SWABBCO 6/6, SWABBCO 6/6		
Event: COMPLE	TION	T-11-12-11-11-11-11-11-11-11-11-11-11-11-	Start Dat	te: 10/9/20)12			End Date: 10/16/2012		
Active Datum: R Level)	KB @4,811.00usft (a	above Mean Se	ea	UWI: SE/NW/0/9/S/21/E/20/0/0/26/PM/N/2124/E/0/2189/0/0						
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation		
	7:15 - 7:15	0.00	FRAC	30		Þ		ND BOPS NU FRAC VALVES PLACE HNGR IN TUB HEAD TEST TO 9000 PSI RD TESTER RU W/L RIH PERF 1ST STAGE		
								STAGE #1] PU RIH W/ 3-3/8" GUN, 23 GM, .36 HOLE LMV 11060-61' 3 SPF 3 HOLES LMV 11051-52' 3 SPF 3 HOLES LMV 11032-33' 3 SPF 3 HOLES		
								LMV 10974-75' 3 SPF 3 HOLES LMV 10944-45 3 SPF 3 HOLES LMV 10937-38 3 SPF 3 HOLES		
								LMV 10914-15 3 SPF 3 HOLES SWI SDFN SUPERIOR TO RU THIS AFTERNOON TO BE READY TO FRAC FIRST THING IN MORNING		
10/11/2012	7:00 - 7:15	0.25	FRAC	48		Р		JSA= FRAC		

11/6/2012 10:19:14AM

2

				Opera	tion S	umma	ry Report	
Well: NBU 921	-20F						Spud Date: 3/	19/2012
roject: UTAH-	UINTAH		Site: NB	U 921-20F				Rig Name No: SWABBCO 6/6, SWABBCO 6/6
vent: COMPL	ETION		Start Dat	e: 10/9/20	12			End Date: 10/16/2012
	RKB @4,811.00usft (a	bove Mean Se	ea	UWI: SE	E/NW/0/9/	/S/21/E/20	/0/0/26/PM/N/2	124/E/0/2189/0/0
evel) Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
· · · · · · · · · · · · · · · · · · ·	7:15 - 18:00	10.75	FRAC	30	T COUC 1	Р	(doily	MIRU SUPERIOR PRESS TEST PUMPS & LINES 9500 PSI CHECK & SET POP OFF ON SURFACE 8800 PSI
								STAGE #1] WELLHEAD PRESS=1750 psi BREAK PRESS=4904 PSI INJ RT=51.9 INJ PSI=6299# FG=.76 W/ 21/21.PERFS OPEN, MAX PSI=7828# MAX RT= 52.3 AP= 6462# AR=49.8 FG=.78 ISIP=3798# NPI=251# PUMPED 3461 BBLS SLICK WTR, W/ 81758 # 30/50 TLC SAND
								STAGE#2] PU RIH W/ CBP & 3-3/8" PERF GUN SET CBP @10890', PERF LMV @, W/ 23 GM, .36" HOLES, 24 HOLES AS PER PROC. LMV, 10859-60' 3 SPF 3 HOLES LMV, 10848-49' 3 SPF 3 HOLES LMV, 10834-36' 3 SPF 6 HOLES LMV, 10823-24' 3 SPF 3 HOLES LMV, 10796-97' 3 SPF 3 HOLES LMV, 10796-97' 3 SPF 6 HOLES
								WELLHEAD PRESS=2440 PSI BREAK PRESS=5136 PSI, INJ RT= 48.8, INJ PSI=6345 PSI, FG=.79, W/ 24/24 PERF OPEN MAX PSI=7369 PSI MAX RT= 49.0, AP=6583 PSI, AR=46.8, FG=.80, ISIP=3921 PSI, NPI=98 PSI, PUMPED= 3307 BBLS SLICK WTR, W/ 81902 # 30/50 TLC SAND
								STAGE#3] PU RIH W/ CBP & 3-3/8" PERF GUN SET CBP @10107', PERF LMV @, W/ 23 GM, .36" HOLES, 21 HOLES AS PER PROC. MESA VERDE, 10075-77' 3 SPF 6 HOLES 10004-05' 3 SPF 3 HOLES 9963-64' 3 SPF 3 HOLES 9881-82' 3 SPF 3 HOLES 9840-41' 3 SPF 3 HOLES 9824-25' 3 SPF 3 HOLES
								WELLHEAD PRESS=1173 PSI, BREAK PRESS=4192 PSI, INJ RT=45.1, INJ PSI=6345 PSI, FG=.79, W/ 14/21 PERFS OPEN, MAX PSI=8205 PSI, MAX RT=49 AP=6422 PSI, AR= 45.8, FG=.73, W/14/21 PERFS OPEN, ISIP=2941 PSI, NPI=212 PSI, PUMPED875 BBLS SLICK WTR, W/16101 # 30/50 TLC SAND
								STAGE#4] PU RIH W/ CBP & 3-3/8" PERF GUN SET CBP @9802', PERF LMV @, W/ 23 GM, .36" HOLES, 24 HOLES AS PER PROC. MESA VERDE, 9771-72' 3 SPF, 3 HOLES 9761-62' 3 SPF, 3 HOLES 9744-45' 3 SPF, 3 HOLES 9695-96' 3 SPF, 3 HOLES 9670-71' 3 SPF, 3 HOLES 9638-39' 3 SPF, 3 HOLES 9613-14' 3 SPF, 3 HOLES 9562-63' 3 SPF, 3 HOLES

US ROCKIES REGION Operation Summary Report Spud Date: 3/19/2012 Well: NBU 921-20F Rig Name No: SWABBCO 6/6, SWABBCO 6/6 Site: NBU 921-20F Project: UTAH-UINTAH End Date: 10/16/2012 Event: COMPLETION Start Date: 10/9/2012 UWI: SE/NW/0/9/S/21/E/20/0/0/26/PM/N/2124/E/0/2189/0/0 Active Datum: RKB @4,811.00usft (above Mean Sea Level) Phase Code P/U Operation Date Time Duration Sub MD From Start-End Code (usft) WELLHEAD PRESS=1035 PSI, BREAK PRESS=4134 PSI, INJ RT=48.5, INJ PSI=7505 PSI, FG=.73, MAX PSI= 8221 PSI, MAX RT=49.9, AP= 6904 PSI, AR=46.0, FG=.81 , W/ 15/24 PERFS OPEN, ISIP=3596 PSI, NPI=755. PUMPED 1062 BBLS SLICK WTR , W/ 23280 # 30/50 TLC SAND STAGE#5] PU RIH W/ CBP & 3-3/8" PERF GUN SET CBP @9528', PERF LMV @, W/ 23 GM, .36" HOLES, 24 HOLES AS PER PROC. MESA VERDE, 9494-95' 3 SPF, 3 HOLES 9476-77' 3 SPF, 3 HOLES 9441-42' 3 SPF, 3 HOLES 9420-21' 3 SPF, 3 HOLES 9394-95' 3 SPF, 3 HOLES 9370-71' 3 SPF, 3 HOLES 9342-43' 3 SPF, 3 HOLES 9309-10' 3 SPF, 3 HOLES

Р

FRAC

48

0.25

SIW SDFN

JSA= FRAC & W/L SAFETY

4

10/12/2012

7:00 - 7:15

Operation Summary Report

Well: NBU 921	-20F			Spud Date: 3/19/2012						
roject: UTAH-UINTAH Site: NE			Site: NBU	921-20F	•			Rig Name No: SWABBCO 6/6, SWABBCO 6/6		
Event: COMPLETION Sta			Start Date	e: 10/9/20)12			End Date: 10/16/2012		
Active Datum:	RKB @4,811.00usft (a	above Mean Se	a	UWI: SE	E/ NW /0/9/	S/21/E/20	/0/0/26/PM/N/212	24/E/0/2189/0/0		
Level)										
Level) Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation		

WELLHEAD PRESS=2392 PSI, BREAK PRESS=3716 PSI. INJ RT= 48.5. INJ PSI=5324 PSI. FG=.74. MAX PSI=7495 PSI, MAX RT=52.3, AP= 5482 PSI, AR=50.9, FG=.76 , W/24/24 PERFS OPEN, ISIP=3046 PSI, NPI=219 PSI, PUMPED 1082 BBLS SLICK WTR , W/24419 # 30/50 TLC SAND

STAGE#6] PU RIH W/ CBP & 3-3/8" PERF GUN SET CBP @9262' . PERF MESA VERDE , W/ 23 GM, .36" HOLES, 21 HOLES AS PER PROC.

MESA VERDE, 9231-32' 3 SPF, 3 HOLES

9215-16' 3 SPF, 3 HOLES

9174-75' 3 SPF, 3 HOLES

9087-88' 3 SPF. 3 HOLES

9049-50' 3 SPF, 3 HOLES 9027-28' 3 SPF, 3 HOLES

9009-10' 3 SPF, 3 HOLES, 21

HOLES

WELLHEAD PRESS=1903 PSI, BREAK PRESS=3714 PSI, INJ RT=49.5. INJ PSI=7954 PSI, FG=.75, MAX PSI=7588 PSI, MAX RT=51.9, AP= 6117 PSI, AR=50.4, FG=.77, , W/13/21 PERFS OPEN, ISIP=3028 PSI, NPI=154 PSI, PUMPED 1060 BBLS SLICK WTR , W/ 22250 # 30/50 TLC SAND

STAGE#7] PU RIH W/ CBP & 3-3/8" PERF GUN SET CBP @8822, PERF MESA VERDE @, W/ 23 GM, .36" HOLES, 24 HOLES AS PER PROC.

MESA VERDE, 8791-92, 3 SPF, 3 HOLES

8750-52', 3 SPF, 6 HOLES

8723-24', 3 SPF, 3 HOLES

8659-61, 3 SPF, 6 HOLES

8623-24', 3 SPF, 3 HOLES

8588-89', 3 SPF, 3 HOLES WELLHEAD PRESS=1367 PSI, BREAK

PRESS=3623' PSI, INJ RT=52, INJ PSI= 5736 PSI, FG= .75, MAX PSI=6400 MAX RT=52.3, AP=5120 PSI, AR= 51.2, FG=.78, , W/ 22/24 PERFS OPEN, ISIP=2970 PSI, NPI=244 PSI, PUMPED 1020 BBLS SLICK WTR , W/ 23170 # 30/50 TLC SAND STAGE#8] PU RIH W/ CBP & 3-3/8" PERF GUN SET CBP @8547' , PERF LMV @ , W/ 23 GM, .36" HOLES, 21 HOLES AS PER PROC.

MESA VERDE, 8516-17' 3 SPF, 3 HOLES

8488-89' 3 SPF, 3 HOLES

8415-16' 3 SPF, 3 HOLES

8402-03', 3 SPF, 3 HOLES

8293-94', 3 SPF, 3 HOLES

8267-68', 3 SPF, 3 HOLES

8252-53', 3 SPF, 3 HOLES 21 HOLES

WELLHEAD PRESS=2112 PSI, BREAK PRESS=3164 PSI, INJ RT=52.4, INJ PSI=2527 PSI, FG=.74, MAX PSI=5414 PSI, MAX RT= 52.8, AP=5090 PSI,

				Opera	ition S	lummary Report				
Vell: NBU 921-2	0F			Spud Date: 3/19/2012						
roject: UTAH-U	INTAH		Site: NBU	J 921-20F	=		Rig Name No: SWABBCO 6/6, SWABBCO 6/6			
vent: COMPLE	TION		Start Dat	e: 10/9/20	012		End Date: 10/16/2012			
Active Datum: RKB @4,811.00usft (above Mean Sea Level)					E/NW/0/9	/S/21/E/20/0/0/26/PM/N/21	124/E/0/2189/0/0			
Date	Time Start-End	Duration . (hr)	Phase	Code	Sub Gode	P/U MD From (usft)	Operation			
	Oldiverio	<u> </u>			. code:	Gary	AR= 51.7, FG=.78, , W/ 21/21 PERFS OPEN, ISIP=2844 PSI, NPI= 317 PSI, PUMPED 949 BBLS SLICK WTR , W/ 22215 # 30/50 TLC SAND			
							STAGE#9] PU RIH W/ CBP & 3-3/8" PERF GUN SET CBP @8179', PERF MESA VERDE @, W/ 23 GM, .36" HOLES, 21 HOLES AS PER PROC. MESA VERDE, 8146-49', 3 SPF, 9 HOLES 8044-46' 3 SPF, 6 HOLES 21 HOLES 8028-30' 3 SPF, 6 HOLES 21 HOLES			
							WELLHEAD PRESS=1098 PSI, BREAK PRESS= 2590 PSI, INJ RT=52.1, INJ PSI=5461 PSI, FG=.67, MAX PSI=6364 PSI, MAX RT=52.8, AP= 4879 PSI, AR=51.7, FG=.76, W/ 18/21 PERFS OPEN, ISIP=2626 PSI, NPI=758 PSI, PUMPED 493 BBLS SLICK WTR, W/ 23385 # 30/50 TLC SAND			
10/15/2012	7:00 - 7:15	0.25	DRLOUT	48		P	PU KILL PLUG PULL INTO LUBE PULL OUT OF ROPE SOCKET DROP PLUG ONTO VALVE LAY DOWN W/L REHEAD PU W/L EQUIP RIH TAG ON PIECE OF PLUG POOH PU GUAGE RNG RIH TO 8010' POOH W/JUNK BASKET PU CBP RIH SET @ 7978' SIW RD W/L & FRAC EQUIP SIW SDFW PUMPED 13309 TOTAL CLEAN BBLS PUMPED 318480# SAND JSA= DRILL CBPS			

r e				Opera	ation S	Summa	ıry Report		
Well: NBU 921-2	oF	**************************************		<u>KUMELAKAN</u>	6 (20) (44 (10) (2) (10) (2) (10)		Spud Date: 3/1	9/2012	
Project: UTAH-U	INTAH		Site: NBU	921-20	=			Rig Name No: SWABBCO 6/6, SWABBCO 6/6	
Event: COMPLE	TION		Start Date	e: 10/9/2	012			End Date: 10/16/2012	
Active Datum: Rk Level)	KB @4,811.00usft (at	oove Mean Se	ea	UWI: S	UWI: SE/NW/0/9/S/21/E/20/0/0/26/PM/N/2124/E/0/2189/0/0				
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From	Operation	
	7:15 - 17:00	9.75	DRLOUT	30		P	1	SIWP= 0 PSI ND FRAC VALES NU 10K BOPS RU FLOOR & TUBING EQUIP PU POBS PKG RIH TAG 1 ST PLUG @ 7918' RU DRLG EQUIP EST CIRC TEST BOPS TO 3000 PSI . PLUG #1] DRILL THRU HALLI 8K CBP @ 7978' IN 7 MIN W/ 100 PSI INCREASE	
								PLUG #2] CONTINUE TO RIH TAG SAND @ 8159' (20' FILL) C/O & DRILL THRU HALLI 8K CBP @ 8179' IN 7 MIN W/ 100 PSI INCREASE	
								PLUG #3] CONTINUE TO RIH TAG SAND @ 8527' (25' FILL) C/O & DRILL THRU HALLI 8K CBP @ 8547' IN 9 MIN W/ 150# INCREASE	
								PLUG #4] CONTINUE TO RIH TAG SAND @ 8797' (20' FILL) C/O & DRILL THRU HALLI 8K CBP @ 8822' IN 8 MIN W/ 100 PSI INCREASE	
								PLUG #5] CONTINUE TO RIH TAG SAND @ 9232' (30' FILL) C/O & DRILL THRU HALLI 8K CBP @ 9262' IN 11 MIN W/ 150# INCREASE	
								PLUG #6] CONTINUE TO RIH TAG SAND @ 9498' (30' FILL) C/O & DRILL THRU HALLI 8K CBP @ 9528' IN 10 MIN W/ 150# INCREASE	
								PLUG #7] CONTINUE TO RIH TAG SAND @ 9772' (30' FILL) C/O & DRILL THRU HALLI 8K CBP @ 9802' IN 9 MIN W/ 100# INCREASE CONTINUE TO RIH 2 JNTS ALLOW WELL TO FLOW 45 MIN TO CLEAN UP SIW SDFN	
10/16/2012	7:00 - 7:15	0.25	DRLOUT	48		P		JSA= LANDING TUBING	

10:19:14AM

				Opera	tion S	Summa	ry Report	
Well: NBU 921-2	oF						Spud Date: 3/19	/2012
Project: UTAH-U	INTAH		Site: NBL	J 921-20F				Rig Name No: SWABBCO 6/6, SWABBCO 6/6
Event: COMPLE	TION		Start Date	e: 10/9/20	112			End Date: 10/16/2012
Active Datum: Rh	KB @4,811.00usft (al	oove Mean S	ea	UWI: SE	E/NW/0/9	9/S/21/E/20)/0/0/26/PM/N/212	4/E/0/2189/0/0
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	7:15 - 15:00	7.75	DRLOUT	30		Р		SIWP= 2900 PSI OPEN WELL TO PIT RIH TAG FILL
								PLUG #8] CONTINUE TO RIH TAG SAND @ 10087' (20' FILL) C/O & DRILL THRU HALLI 8K CBP @ 10107' IN 11 MIN W/ 250# INCREASE
								PLUG #9] CONTINUE TO RIH TAG SAND @ 10865' (25' FILL) C/O & DRILL THRU HALLI 8K CBP @ 10890' IN 11 MIN W/ 700# INCREASE
								PBTD] CONTINUE TO RIH TAG SAND @ 11060' (190' FILL) C/O & DRILL TO 11130' COULDNT MAKE HOLE TUB JUST SPINS POOH LD 13 JNTS LAND TUBING ON HNGR W/ 339 JNTS 2-3/8" P-110 EOT @ 10742.44' ND BOPS NU WELLHEAD
								TUBING DETAIL K.B
								TOTAL FLUID PUMPED= 13309 BBLS RIG REC= 3000 BBLS LEFT TO REC= 10309 BBLS
								TUB DEL= 377 JNTS USED= 339 JNTS RETURNED= 38 JNTS
	15:00 - 15:00	0.00	DRLOUT	50				WELL TURNED TO SALES @ 1115 HR ON 10/16/2012 1100 MCFD, 1920 BWPD, FCP 2750#, FTP 1900#, 20/64" CK.
10/20/2012	7:00 -			50				WELL IP'D ON 10/20/12 - 3234 MCFD, 624 BWPD, 0 BOPD, CP 2#, FTP 2392#, LP 254#, 24 HRS, CK 20/64



Project: UTAH - UTM (feet), NAD27, Zone 12N

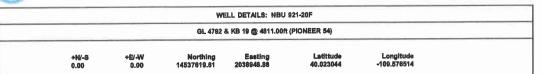
Site: NBU 921-20F Well: NBU 921-20F

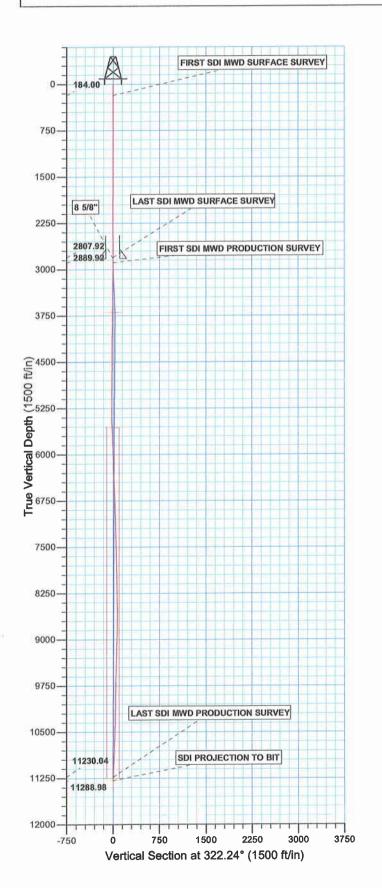
Wellbore: OH Design: OH

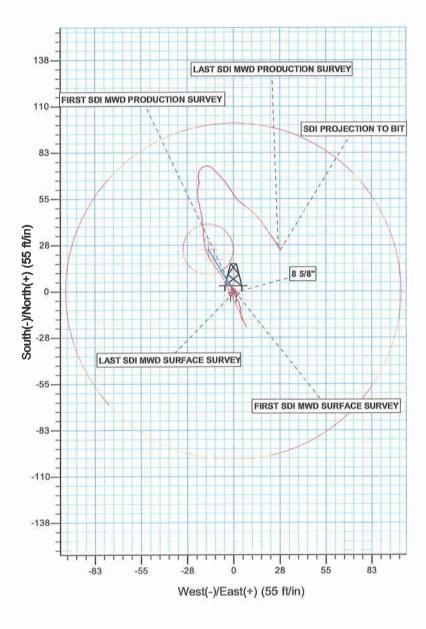


Azimuths to True North Magnetic North: 11.02°

> Magnetic Field Strength: 52258.5snT Dip Angle: 65.85° Date: 03/12/2012 Model: IGRF2010







PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N

Geodetic System: Universal Transverse Mercato Datum: NAD 1927 (NADCON CONUS) Ellipsoid: Clarke 1986 Zone: Zone 12N (114 W to 108 W) Location: SECTION 20 T9S R21E

System Datum: Mean Sea Level

Design: OH (NBU 921-20F/OH)

Created By: Gabe Kendali Date: 14:06, August 28 2012



US ROCKIES REGION PLANNING

UTAH - UTM (feet), NAD27, Zone 12N NBU 921-20F NBU 921-20F

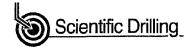
OH

Design: OH

Standard Survey Report

28 August, 2012







Company:

US ROCKIES REGION PLANNING

Project:

UTAH - UTM (feet), NAD27, Zone 12N

Site Well: NBU 921-20F NBU 921-20F

Wellbore: Design:

OH ОН Local Co-ordinate Reference:

TVD Reference:

MD Reference:

North Reference:

Survey Calculation Method: Database:

Well NBU 921-20F

GL 4792 & KB 19 @ 4811.00ft (PIONEER 54) GL 4792 & KB 19 @ 4811.00ft (PIONEER 54)

True

Minimum Curvature

EDM 5000.1 Single User Db

Project

UTAH - UTM (feet), NAD27, Zone 12N

Map System: Geo Datum:

Universal Transverse Mercator (US Survey Feet)

NAD 1927 (NADCON CONUS)

Map Zone:

Zone 12N (114 W to 108 W)

System Datum:

Mean Sea Level

Site

From:

NBU 921-20F, SECTION 20 T9S R21E

Site Position:

Lat/Long

Northing: Easting:

14,537,619.61 usft 2,038,948.88 usft Latitude: Longitude:

40.023044

Position Uncertainty:

0.00 ft

Slot Radius:

13,200 in

Grid Convergence:

-109.576514

0.92

Well

NBU 921-20F, 2125 FNL 2189 FWL

Well Position

0.00 ft +N/-S +E/-W

Northing: 0.00 ft Easting:

14,537,619.61 usft 2,038,948.88 usft Latitude: Longitude:

40.023044 -109.576514

Position Uncertainty

0.00 ft

Wellhead Elevation:

ft

Ground Level:

4,792.00 ft

Wellbore

Magnetics

Model Name

Sample Date

Declination (°)

Dip Angle (°)

Field Strength

(nT)

IGRF2010

11.02

52,259

Design

ОН

OH

Audit Notes:

Version:

1.0

Phase:

ACTUAL

Tie On Depth:

65.85

0.00

Vertical Section:

Depth From (TVD)

(ft) 0.00

03/12/12

+N/-S (ft)

0.00

+E/-W (ft)

0.00

Direction (°)

322.24

Survey Program

Date 08/28/12

2,808.00 Survey #1 SDI MWD SURFACE (OH)

11,292.00 Survey #2 SDI MWD PRODUCTION (OH)

From

15.00

2,890,00

То (ft)

Survey (Wellbore)

Tool Name SDI MWD

SDI MWD

Description

SDI MWD - Standard ver 1.0.1 SDI MWD - Standard ver 1.0.1

Measured			Vertical			Vertical Section	Dogleg Rate	Build Rate	Turn Rate
Depth (ft)	inclination (°)	Azimuth (°)	Depth (ft)	+N/-S (ft)	+EJ-W (ft)	(ft)	(°/100ft)	(°/100ft)	(°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15,00	0.00	0.00	15.00	0.00	0.00	0.00	0.00	0.00	0.00
184.00	0.53	93.54	184.00	-0.05	0.78	-0.52	0.31	0.31	0.00
FIRST SDI N	IWD SURFACE S	URVEY							
266.00	0.44	102.60	265.99	-0.14	1.47	-1.01	0.14	-0.11	11.05
355.00	0.53	84.14	354.99	-0.17	2.21	-1.49	0.20	0.10	-20.74
445.00	0.43	293.08	444.99	0.00	2.31	-1.41	1.03	-0.11	-167.84
535.00	0.62	279.26	534.99	0.21	1.52	-0.76	0.25	0.21	-15.36
625.00	0.70	281,36	624.98	0.40	0.50	0.01	0.09	0.09	2.33
715.00	0.79	293.23	714.97	0.75	-0.61	0.97	0.20	0.10	13.19





Company:

US ROCKIES REGION PLANNING

Project:

UTAH - UTM (feet), NAD27, Zone 12N

Site: Well: NBU 921-20F NBU 921-20F

Wellbore: OH Design: OH Local Co-ordinate Reference:

Survey Calculation Method:

TVD Reference:

North Reference:

Database:

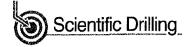
Well NBU 921-20F

GL 4792 & KB 19 @ 4811.00ft (PIONEER 54) GL 4792 & KB 19 @ 4811.00ft (PIONEER 54)

True

Minimum Curvature

Measured			Vertical			Vertical	Dogleg	Build	Turn
Depth	Inclination	Azimuth	Depth	+N/-S	+E/-W	Section	Rate	Rate	Rate
(ft)	inclination (°)	(°)	(ft)	(ft)	(ft)	(ft)	(°/100ft)	(°/100ft)	(°/100ft)
805.00	0.35	321.27	804.97	1.21	-1.35	1.78	0.56	-0.49	31.16
		05.54	004.07	4.67	1.40	0.10	0.41	0.00	71.38
895.00	0.35	25,51 38,43	894.97 984.96	1,67 2.19	-1.40 -1.07	2.18 2.39	0.41	0,00	14.36
985.00	0.44 0.18	36.43 14.70	964.96 1,074.96	2.19	-0.82	2.56	0.14	-0.29	-26,37
1,075.00	0.18	134.66	1,164.96	2.64	-0.68	2.50	0.35	0.00	133,29
1,165.00 1,255.00	0.16	182.84	1,254.96	2.26	-0.60	2.15	0.30	0.19	53.53
·				4.50	0.50	4.50	0.00	0.00	-14.74
1,345.00	0.53	169.57	1,344.96	1.58	-0.53	1.58	0.23	0.20	
1,435.00	0.44	147.77	1,434.96	0.88	-0.27	0.86	0.23	-0.10	-24.22 -15.23
1,525.00	0.70	134.06	1,524.95	0,20	0.30	-0.03	0.32	0,29	-15.23 29.00
1,615.00	0.70	160,16	1,614.95	-0.70	0.89	-1.09	0.35	0.00	
1,705.00	0.26	148.74	1,704.94	-1.39	1.18	-1.82	0.50	-0.49	-12.69
1,795.00	0.18	322,59	1,794.94	-1.45	1,20	-1.88	0.49	-0.09	193,17
1,885.00	0.35	288.57	1,884.94	<i>-</i> 1.25	0.85	-1.51	0.25	0.19	-37.80
1,975.00	0.35	255.96	1,974.94	-1.23	0.33	-1.17	0.22	0.00	-36.23
2,065.00	0.44	255.44	2,064.94	-1.38	-0.28	-0.92	0.10	0.10	-0.58
2,245.00	0.26	188.29	2,244.93	-1.96	-1,00	-0.94	0.23	-0.10	-37.31
2,335.00	0.35	160.69	2,334.93	-2.42	-0.94	-1.34	0.19	0,10	-30.67
2,425.00	0.35	156.30	2,424.93	-2.93	-0.74	-1.87	0.03	0.00	-4.88
2,515.00	0.44	51,53	2,514.93	-2.97	-0.36	-2.13	0.70	0.10	-116,41
2,605.00	0.44	53.99	2,604.93	-2.55	0.19	-2.13	0.02	0.00	2.73
2,695.00	0.57	0.66	2,694.92	-1.90	0.47	-1.79	0.52	0.14	-59.26
2,785.00	0.35	325.05	2,784.92	-1.23	0.32	-1.17	0.39	-0.24	-39.57
2,808.00	0.44	6.18	2,807.92	-1.08	0.29	-1.03	1.26	0.39	178.83
,	WD SURFACE S		,						
2,890.00	0.18	348.46	2,889.92	-0.64	0.30	-0.69	0.33	-0.32	-21.61
,	WD PRODUCTI	ON SURVEY							
2,984.00	0.00	223.66	2,983.92	-0.50	0.27	-0.56	0.19	-0.19	0.00
3,080.00	0,26	193.77	3,079.92	-0.71	0.22	-0.70	0.27	0.27	0.00
3,175.00	0.79	149.12	3,174.92	-1.48	0.50	-1.48	0.67	0.56	-47.00
3,270.00	0.97	160,02	3,269,90	-2,80	1.11	-2.90	0.26	0.19	11.47
3,364.00	1.14	156.86	3,363.89	-4.41	1.75	-4.56	0.19	0.18	-3.36
3,459.00	0.26	332.90	3,458.88	-5.08	2.03	-5.26	1.47	-0.93	185.31
3,554.00	0.26	96.30	3,553.88	-4.92	2.14	-5.20	0.48	0.00	129.89
3,649.00	0.18	124.69	3,648.88	-5.02	2,48	-5.49	0.14	-0.08	29.88
3,744.00	0.62	152.29	3,743.88	-5.56	2.84	-6.14	0.49	0.46	29.05
3,839.00	0.70	166.70	3,838.87	-6.58	3.21	-7.17	0.19	0.08	15.17
3,934.00	0.79	166.09	3,933.87	-7.78	3.50	-8.30	0.10	0.09	-0,64
4,028.00	1.14	151.32	4,027.85	-9.23	4.11	-9.82	0.45	0.37	-15.71
4 400 00	0.04	260.53	4,122.85	-10.09	4.39	-10.67	1.29	-0,98	114.96
4,123.00	0.21	153.34	4,122.85	-10.59	4.42	-11.02	0.66	0.34	-112.83
4,218.00 4,312.00	0.53 0.88	180.15	4,217.84	-10.51	4.61	-12.01	0.50	0.37	28.52
4,407.00	0.67	184.96	4,406.83	-12.91	4,56	-13.00	0.23	-0.22	5.06
4,407.00	0.66	180.86	4,500.82	-14.00	4.50	-13.82	0.05	-0.01	-4.36





Company:

US ROCKIES REGION PLANNING

Project:

UTAH - UTM (feet), NAD27, Zone 12N

Site:

NBU 921-20F

Well: Wellbore: NBU 921-20F

Design:

OH OH Local Co-ordinate Reference:

TVD Reference:

IVD Reference:

MD Reference:

North Reference:

Survey Calculation Method: Database:

Well NBU 921-20F

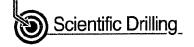
GL 4792 & KB 19 @ 4811.00ft (PIONEER 54)

GL 4792 & KB 19 @ 4811.00ft (PIONEER 54)

True

Minimum Curvature

						37	6-4-	المالية الم	Trum
Measured Depth	Inclination	Azimuth	Vertical Depth	+N/-S	+E/-W	Vertical Section	Dogleg Rate	Build Rate	Turn Rate
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(°/100ft)	(°/100ft)	(°/100ft)
4,596.00	0.87	162.30	4,595.81	-15.23	4.72	-14.93	0.34	0.22	-19.54
4,691.00		167.07	4,690.80	-16.79	5.14	-16.42	0.24	0.22	5.02
4,785.00	0.12	186.20	4,784.79	-17.75	5.32	-17.29	1.03	-1.02	20.35
		101.84	4,879.79	-17.89	5,52	-17.53	0.29	0.15	-88.80
4,880.00		137.61	4,973.79	-18.26	6.02	-18.12	0.38	0.29	38.05
4,974.00	0.53	137.01	4,973.79	-10.20	0.02	-10.12	0.30	0.23	00.00
5,069.00	0.79	142.71	5,068.79	-19.10	6.72	-19.22	0.28	0.27	5.37
5,164.00	1.41	154.71	5,163.77	-20.68	7.61	-21.01	0.69	0.65	12.63
5,258.00	0.88	317.08	5,257.76	-21.20	7.62	-21.42	2.41	-0.56	172.73
5,353.00	1.58	340.11	5,352.74	-19.43	6.67	-19.45	0.89	0.74	24.24
5,448.00	1.23	338.53	5,447.71	-17.25	5.86	-17.23	0.37	-0.37	-1.66
5,542.00	2.64	337.03	5,541.65	-14.32	4.64	-14.16	1.50	1.50	-1.60
		334.49	5,636.56	-10.40	2.88	-9.98	0.15	-0.09	-2.67
5,637.00		334.49	5,731.47	-6.72	1.12	-6.00	0.19	-0.19	-0.09
5,732.00			•	-3.39	-0.52	-2,36	0.18	-0.17	-1.39
5,827.00 5,922.00	2.11 1.76	333,08 331,41	5,826.40 5,921.34	-0.55	-0.32 -2.01	0.80	0.37	-0.37	-1.76
0,022.00	1.,, 0	•	0,021101						
6,017.00	1.58	332.99	6,016.30	1.90	-3.31	3.53	0.20	-0.19	1.66
6,112.00	2,55	334.57	6,111.24	4.97	-4.81	6.88	1.02	1.02	1.66
6,206.00	2.68	334.01	6,205.14	8.84	-6.67	11.07	0.14	0.14	-0.60
6,301.00	2.29	321.83	6,300.05	12.33	-8.81	15.14	0.69	-0.41	-12.82
6,396.00	2.20	317.43	6,394.98	15.16	-11.22	18.86	0.20	-0.09	-4.63
6,494.00	2.29	332.82	6,492.90	18.29	-13.39	22.66	0.62	0.09	15.70
6,586.00	1.76	334.84	6,584.85	21.20	-14.83	25.84	0.58	-0.58	2.20
6,680.00		330.79	6,678.81	23.64	-16.07	28.53	0.23	-0.19	-4.31
6,775.00		350.55	6,773.75	26.84	-17.06	31.67	1.22	0.99	20.80
6,870.00	2.29	354.96	6,868.66	30.79	-17.57	35.10	0.31	-0.24	4.64
					47.04	00.00	0.00	0.00	1.95
6,965.00	2.29	356.81	6,963,59	34.58	-17.84	38.26	0.08		
7,060.00		354.26	7,058.53	37.93	-18.09	41.06	0.57	-0.56	-2.68
7,155.00		352.42	7,153.49	40.60	-18.40	43.37	0.29	-0.28	-1.94
7,249.00		359.01	7,247.46	43.04	-18.58	45.40	0.18	0.00	7.01
7,344.00	2.73	347.41	7,342.39	46.48	-19.10	48.44	1.37	1.31	-12.21
7,438.00	2.29	347.14	7,436.30	50.49	-20.00	52.17	0.47	-0.47	-0.29
7,533.00		347.93	7,531.23	53.98	-20.77	55.40	0.29	-0.28	0.83
7,628.00	1.76	354.79	7,626.18	57.07	-21.26	58.14	0.36	-0.27	7.22
7,723.00		6.01	7,721.14	59.79	-21.26	60.29	0.41	-0.23	11.81
7,818.00		8.72	7,816.11	62.08	-20.97	61.92	0.32	-0.32	2.85
		05.07	7.044.40	60.60	00.40	62,82	0.67	-0.47	27.99
7,913.00		35.31	7,911.10	63.63	-20.43			-0.47 0.12	-51.11
8,008.00		346.76	8,006.09	64.89	-20.22	63.69	0.74		
8,103.00		346.26	8,101.08	66.40	-20.59	65.10	0.07	0.07	-0.53
8,198.00		2.00	8,196.06	68.12	-20.74	66.56	0.35	0.18	16.57
8,292.00	1.06	5.42	8,290.04	69.92	-20.63	67.91	0.11	-0.09	3.64
8,387,00	0.97	22.56	8,385.03	71.54	-20.24	68.95	0.33	-0.09	18.04
8,482.00		47.87	8,480.02	72.77	-19.39	69.41	0.44	-0.09	26.64
8,577.00		55.08	8,575.01	73.68	-18.25	69.43	0,12	0,00	7.59
8,673.00		70.02	8,670.99	74.41	-16.81	69.12	0.32	0.19	15.56





Company:

US ROCKIES REGION PLANNING

Project:

UTAH - UTM (feet), NAD27, Zone 12N

Site: Well: NBU 921-20F NBU 921-20F

Wellbore: Design:

ОН ОН

Local Co-ordinate Reference:

TVD Reference:

MD Reference: North Reference:

Survey Calculation Method:

Database:

Well NBU 921-20F

GL 4792 & KB 19 @ 4811.00ft (PIONEER 54) GL 4792 & KB 19 @ 4811.00ft (PIONEER 54)

True

Minimum Curvature

Measured			Vertical			Vertical	Dogleg	Build	Turn
Depth (ft)	Inclination (°)	Azimuth (°)	Depth (ft)	+N/-S (ft)	+E/-W (ft)	Section (ft)	Rate (°/100ft)	Rate (°/100ft)	Rate (°/100ft)
8,767.00	0.97	101.40	8,764.98	74.55	-15.21	68.25	0.59	-0.10	33,38
8,862.00	0.88	107.55	8,859.97	74.17	-13.73	67.04	0.14	-0.09	6.47
8,957.00	0.88	133.13	8,954.96	73.45	-12.50	65.72	0.41	0.00	26.93
9,052.00	1.14	135.19	9,049.94	72.28	-11.30	64.06	0.28	0.27	2.17
9,146.00	1.32	139.98	9,143.92	70.79	-9.95	62.05	0.22	0.19	5.10
9,242.00	1.42	131.55	9,239.89	69.15	-8.35	59.78	0.23	0.10	-8.78
9,336.00	1.58	139.98	9,333.86	67.39	-6.64	57.34	0.29	0.17	8.97
9,431.00	1.49	144.47	9,428.83	65.38	-5.08	54.80	0.16	-0.09	4.73
9,526.00	1.32	144.73	9,523.80	63.48	-3.73	52.47	0.18	-0.18	0.27
9,621.00	1.06	147.45	9,618.78	61.85	-2.63	50.50	0.28	-0.27	2.86
9,715.00	0.79	136.73	9,712.76	60.64	-1.71	48.99	0.34	-0.29	-11.40
9,811.00	1.06	150.27	9,808.75	59.39	-0.82	47.45	0.36	0.28	14.10
9,905.00	1.23	147.37	9,902.73	57.78	0.15	45.59	0.19	0.18	-3.09
10,001.00	1.23	147.10	9,998.71	56.05	1.27	43.54	0.01	0.00	-0.28
10,095.00	1.06	136.29	10,092.69	54.57	2.42	41.67	0.29	-0.18	-11.50
10,190.00	0.97	130.75	10,187.68	53.41	3.63	40.00	0.14	-0.09	-5.83
10,285.00	1.37	128.48	10,282.66	52.18	5.13	38.11	0.42	0.42	-2.39
10,380.00	1.56	126.36	10,377.63	50.71	7.06	35.77	0.21	0.20	-2.23
10,475.00	1.67	127.33	10,472.59	49.10	9.21	33.18	0.12	0.12	1.02
10,570.00	1.76	130.23	10,567.55	47.32	11.42	30.42	0.13	0.09	3.05
10,664.00	2.02	138.67	10,661.49	45,15	13.62	27.35	0.40	0.28	8.98
10,759.00	2.11	142.18	10,756.43	42.51	15.79	23.93	0.16	0.09	3.69
10,854.00	2.29	143.67	10,851.36	39.60	17.99	20.29	0.20	0.19	1.57
10,948.00	2.29	145.61	10,945.29	36.53	20.16	16.54	80.0	0.00	2.06
11,043.00	2.37	146.05	11,040.21	33.34	22.33	12.68	0.09	0.08	0.46
11,138.00	2.46	145.78	11,135.13	30.02	24.58	8.69	0.10	0.09	-0.28
11,233.00	2.46	150.79	11,230.04	26.56	26.72	4.64	0.23	0.00	5.27
LAST SDI M	WD PRODUCTIO	ON SURVEY							
11,292,00	2.46	150.79	11,288.98	24.35	27.95	2.13	0.00	0.00	0.00

Casing Points Measured Depth (ft)	Vertical Depth (ft)		Name	Casing Diameter (in)	Hole Diameter (in)
2,825.00	2,824.92	8 5/8"		8,625	11.000



SDI

Survey Report



Company:

US ROCKIES REGION PLANNING

Project:

UTAH - UTM (feet), NAD27, Zone 12N NBU 921-20F

Site: Well:

NBU 921-20F

Wellbore: Design:

ОН ОН

Local Co-ordinate Reference:

TVD Reference:

MD Reference:

North Reference:

Survey Calculation Method: Database:

Well NBU 921-20F

GL 4792 & KB 19 @ 4811.00ft (PIONEER 54) GL 4792 & KB 19 @ 4811.00ft (PIONEER 54)

True

Minimum Curvature

Design Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coo +N/-S (ft)	ordinates +E/-W (ft)	Comment
184.00	184.00	-0.05	0.78	FIRST SDI MWD SURFACE SURVEY
2,808.00	2,807.92	-1.08	0.29	LAST SDI MWD SURFACE SURVEY
2,890.00	2,889.92	-0.64	0.30	FIRST SDI MWD PRODUCTION SURVEY
11,233.00	11,230.04	26.56	26.72	LAST SDI MWD PRODUCTION SURVEY
11,292.00	11,288.98	24,35	27.95	SDI PROJECTION TO BIT

Checked By:	Approved By:	Date: